



# A challenging diagnosis: Recurrent nevus or melanoma

*Zorlayıcı bir tanı: Tekrarlayan nevüs veya melanom*

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## Abstract

Recurrent pigmentations on scars after melanocytic tumor excision can be confusing due to its similarities to melanoma. Meanwhile, these conditions which can be mixed with malignant conditions also cause difficulties in diagnosis. Herein, we present a melanoma case developed on a scar region after a while later compound nevus excision.

**Keywords:** Melanoma, recurrent nevus, recurrent melanocytic lesion

## Öz

Melanositik tümör eksizyonu sonrası skar üzerinden gelişen pigmentasyonlar, melanoma benzerlikleri nedeniyle kafa karıştırıcı olabilmektedir. Malignite ile karışabilen bu durumlar, tanıda güçlükler de neden olmaktadır. Bu çalışmada, birleşik nevüs eksizyonundan kısa bir süre sonra skar yerinden gelişmiş bir melanom olgusu sunulmuştur.

**Anahtar Kelimeler:** Melanom, rekürren nevüs, rekürren melanositik lezyon

## Introduction

Pigmentation recurring on the site of a removed melanocytic lesion is often a diagnostic challenge due to its clinical and pathologic resemblance to melanoma. Herein, we present a case with post-excisional repigmentation on the scar site of a totally excised compound nevus that was diagnosed as melanoma after the pathologic examination of the total excision of the post-excisional repigmentation.

nevus on the forehead 3 years ago with a pathologic diagnosis of compound nevus with intact surgical margins. The patient clearly remembered that there was recurring pigmentation on the scar site at the time of suture removal 10 days after the total excision of the nevus, however no additional excision was planned depending on the pathology report. Although the post-excisional repigmentation progressively increased and extended beyond the borders of the scar in the following months, she was reluctant to re-visit her doctor due to the fact that the pathology report was benign. However, 3 years after the first total excision, the recurrent lesion was totally excised due to its prominent bizarre shape, which was very eye-catching to anybody (Figure 1).

## Case Report

A 26-year-old female was admitted with a diagnosis of melanoma. History revealed a total excision for a growing

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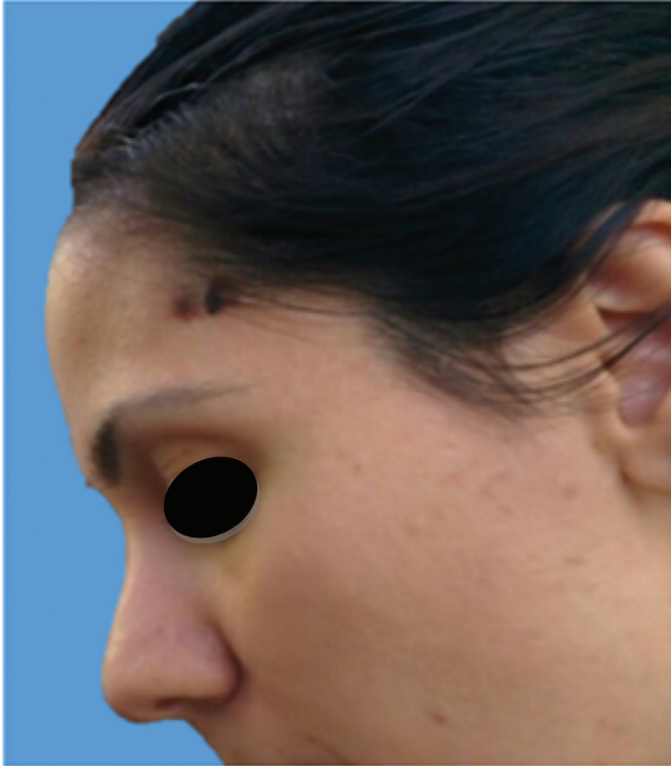
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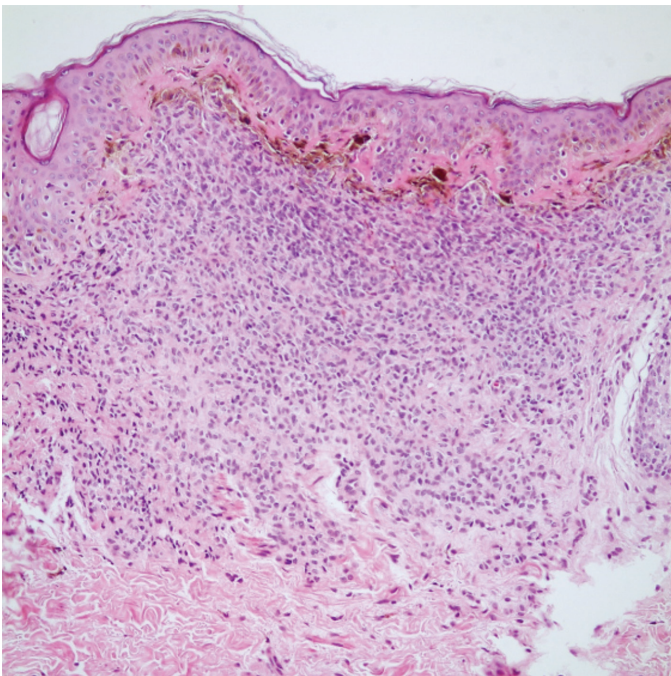
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This time the pathologic examination revealed a superficial spreading melanoma with a tumour thickness of greater than 0.8 mm and less than 1 mm without ulceration. Dermatologic examination at the time of referral to our hospital revealed only a 2.0x0.6 cm linear scar on the left forehead. Paraffin embedded tissue blocks from the first excision

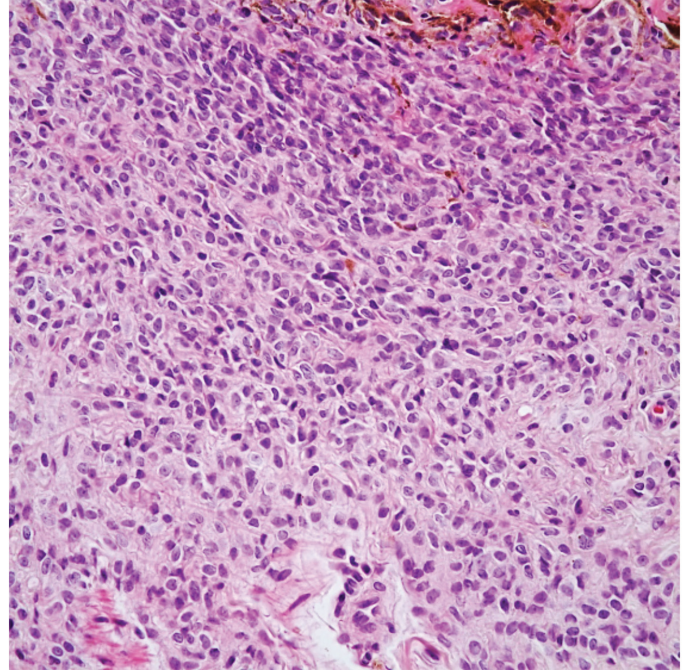


**Figure 1.** Reappearance of a bizarre shaped, brown pigmented macule on and beyond the scar at the left side of the forehead

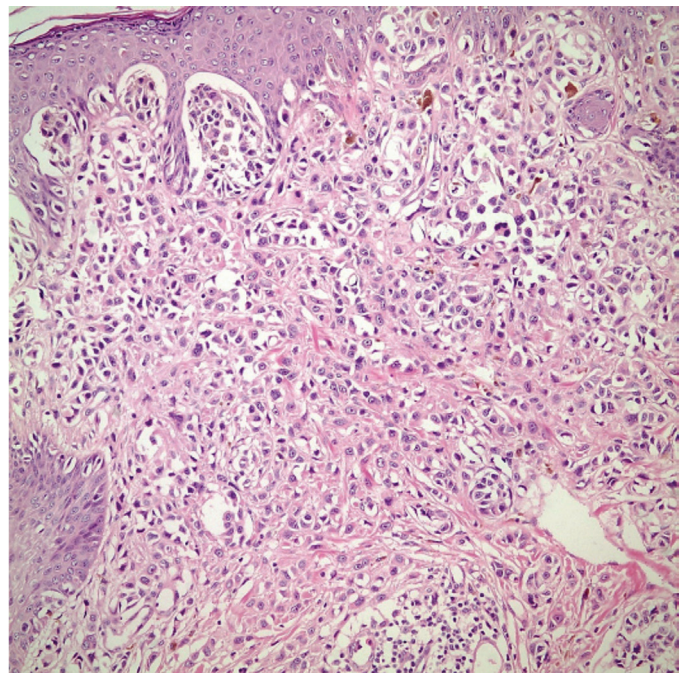


**Figure 2.** The previously excised lesion was a melanocytic lesion with a minor junctional component. (hematoxylin and eosin, x100)

were sectioned totally. Pathology slides and new series of sections from paraffin embedded tissue blocks that belong to the first total excision were interpreted as compound nevus (Figures 2, 3). In pathological examination of the recurrent lesion there were atypical pleomorphic melanocytes with nucleolar prominence proliferating in a somewhat haphazard fashion in the dermis distant from the scar tissue and was diagnosed as superficial spreading melanoma again (Figure 4).



**Figure 3.** The crowded melanocytes were cytologically bland without any features suggesting malignancy (hematoxylin and eosin, x200)



**Figure 4.** There were atypical pleomorphic melanocytes with nucleolar prominence in the dermis distant from the scar tissue (hematoxylin and eosin, x200)



Although the first and the second pathologists were completely in agreement with each other, we decided to consult the specimens to a third dermatopathologist because it was very unlikely that a compound nevus could recur as melanoma. The result of the third pathologic consultation was again melanoma for the recurrent lesion and compound nevus for the first total excision.

Also, fluorescence in situ hybridization (FISH) was performed both for the primary and recurrent lesions. FISH analysis of the primary lesion revealed normal *CCND1* pattern and no *CDKN2A* gene lost, which were reported as negative for melanoma.

In contrast, FISH analysis of the recurrent lesion displayed *RREB* and *CCND1* genes copy gain and *MYB* gene lost which were over the cut-off values and accepted as positive for melanoma. With these clinical and pathologic data, the patient was diagnosed as stage IB melanoma and underwent a second re-excision with 1 cm surgical margins. Although indicated for stage IB melanoma patients, sentinel lymph node biopsy was discussed with the patient but not performed. The patient had regular examinations with 6-month intervals since then and has no further complaints or complications up to now during the 2-year follow-up period. Informed consent was obtained.

## Discussion

Pigmentation on the site of a removed melanocytic lesion is unpleasant for patients and challenging for clinicians. Recurrence of melanocytic lesions usually occurs after inappropriate excision methods such as shave biopsy or electrodesiccation<sup>1</sup>. In a study that evaluated post-excisional melanocytic regrowth, it was found that the primary lesions were incompletely excised in 40% of the cases<sup>2</sup>. In another study it was reported that the method of excision was shave excision for all of those recurrent nevi cases<sup>3</sup>. Unlike these examples, in our case the method of excision was standard elliptical excision and the pathology report declared that the surgical margins were intact. Since the lesion has recurred, it is likely that the excision was incomplete, although this was not evident in the sections assessed.

Pathologic features of recurrent nevus and melanoma may be very similar<sup>4,7</sup>. Kornberg and Ackerman<sup>4</sup> suggested some clues to distinguish recurrent nevus from melanoma. Kelly et al.<sup>2</sup> paid attention to the progressive growth pattern and claimed that progressive growth pattern might point out malignant lesions. The most high-lightened feature in common is that the post excisional melanocytic proliferation stays within the scar in recurrent nevus, while this proliferation extends beyond the scar in melanoma<sup>2,5,8,9</sup>. Ancillary diagnostic tools other than standard pathologic examination such as immunohistochemistry, dermoscopy and confocal microscopy have been utilized in order to distinguish recurrent nevus from melanoma<sup>5,8,9</sup>. The distinctive features of these diagnostic tools described in the literature are summarized in Table 1. FISH analysis has also been utilized for the differential diagnosis of recurrent nevus versus melanoma despite some limitations<sup>10</sup>.

In our case, the melanocytic proliferation extending beyond the scar was one of the suggestive features of recurrent melanoma. Confusingly, pathologic examination by 2 different pathologists and a third very competent dermatopathologist revealed that the first lesion was a compound nevus. We saw with interest that there have been similar unexpected examples reported in the literature before. In a

9-case series of recurrent melanocytic lesions, the re-examination of the initial lesions, which were reported as benign on initial histologic examination, revealed 6 cases of previously missed melanomas. The vast majority represented small foci of in situ superficially spreading melanomas<sup>2</sup>.

We know that the development of melanoma on the scar of a benign melanocytic nevus is very unlikely. The most logical explanation for our case is that the pathologic slides of the first excision could not have displayed the foci of melanoma. One striking feature of the current case is the very rapid repigmentation on the scar. We concluded that repigmentation on the scar at the time of suture removal, should raise suspicion for melanoma even if the pathology is benign. We should bear in mind that although the early repigmentation may remain in the scar, by time it may exceed the borders of the scar which is a more prominent feature for recurrent melanoma.

**Table 1. Distinctive features of different diagnostic tools to differentiate recurrent nevus from melanoma**

	Recurrent nevus	Melanoma
<b>Pathologic features<sup>2,3,5,6</sup></b>	Monomorphous cytology of melanocytes and small nuclei	Cellular atypia and prominent nuclei
	No mitoses, no necrosis	Presence of mitoses and necrosis
	Presence of melanocyte nests at the dermoepidermal junction or in the dermis	Presence of melanocytes at various levels in the epidermis/dermis
	Recurrent pigmentation restricted to the scar	Extension of recurrent pigmentation beyond the scar
<b>Immunohistochemical staining<sup>5</sup></b>	Gradual decrease in HMB-45 and tyrosinase staining	No gradual decrease in HMB-45 and tyrosinase staining
	Lower percentage of Ki-67 proliferation index	Higher percentage of Ki-67 proliferation index
<b>Dermoscopic features<sup>9</sup></b>	Radial lines, symmetry and centrifugal growth pattern	Circles, peripheral eccentric hyperpigmentation, non-continuous growth pattern and pigmentation beyond the scar
<b>Confocal microscopy<sup>8</sup></b>	Non-prominent pagetoid or lateral spread of melanocytes	Pleomorphic dendritic pagetoid cells with folliculotropism
	Repigmentation limited to the scar	Repigmentation extended into the normal tissue
HMB: Human melanoma black		

## Ethics

**Informed Consent:** Informed consent was obtained from our patient.

**Peer-review:** Internally peer-reviewed.

## Authorship Contributions

Surgical and Medical Practices: G.E., S.K.Y., Ö.G., Ö.B., Concept: G.E., S.K.Y., Ö.G., S.D.G., Ö.B., H.K., Design: G.E., S.K.Y., Ö.G., S.D.G., H.K., Data Collection or Processing: G.E., S.K.Y., Ö.G., S.D.G., Ö.B., H.K., Analysis or Interpretation: G.E., S.K.Y., Ö.G., S.D., Ö.B., H.K., Literature Search: G.E., S.K.Y., Writing: G.E., S.K.Y., Ö.G., S.D.G., Ö.B., H.K.

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