# Melanoma Disguised as Chronic Ulceration of the Lower Extremity: A Case Series

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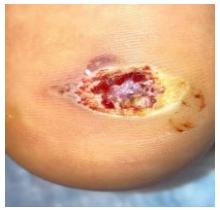
## Introduction

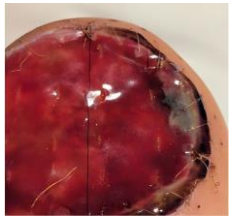
Melanoma is a malignant tumor arising from the pigment producing cell of the skin (melanocyte). Melanoma of the foot accounts for three to fifteen percent of all cutaneous melanomas. All subtypes are seen, but acral lentiginous melanoma is the most prevalent. Acral lentiginous melanoma (ALM) is in the basal layer of the epidermis. It is the only type of malignant melanoma which arises equally across all skin types. ALM represents about half of the melanoma occurring on the hands and feet. ALM grows more slowly than other melanomas.

## Case 1

Patient is a 60-year-old female with past medical history of anemia who presented for evaluation of chronic right heel ulceration. Her wound began in November 2022 and began worsening in February 2023. The lesion started as a callus to the plantar right foot. The patient states she was picking at the lesion which then began to blister and progress to a wound. She did not notice any infection, malodor, drainage, or redness to the area. She was applying hydrocolloid to the wound. She denied history of trauma to the area, skin cancer or constitutional symptoms. The wound had asymmetrical borders, measuring 1.0 x 1.0 x 0.2 cm.



Initial presentation



**5/6/23**
Integra intact
Prior to STSG application

**5/18/23**
Post STSG application

**TREATMENT**

- A two mm punch biopsy revealed diagnosis of acral lentiginous melanoma with Breslow depth of 1.8 mm and Clark level IV. This was treated surgically with wide local excision with two cm margins on 04/10/2023. Total resection was 5.0 x 5.5 centimeters. An acellular dermal bilayer graft (total of 27.5 centimeter squared) was then placed for 4-6 weeks. Additionally, the patient had pre-op lymphoscintigraphy where two right inguinal sentinel node biopsies were performed. Four to six weeks later, a second procedure was completed including application of a split-thickness skin graft (STSG) from the right thigh. This second surgery had a separate 4-week recovery time.

Pathology results showed residual melanoma, invasive to a new depth of 2.3 mm in the deep dermis. Both lymph nodes showed metastasis, pathologic stage pT3a pN2a (pT3a: > 2.0 - 4.0 mm thickness without ulceration; N2a: There are tumor cells found in 4 to 6 regional lymph nodes). An MRI and PET scan were ordered, and the patient was referred to Medical Oncology for further assistance and recommendations.

## Case 2

Patient is a 67-year-old male with type two diabetes and a non healing right heel wound since February 2023. The patient has a history of melanoma in situ to the same site where the wound is located which was previously excised in February 2013. He states the wound began as a scar which he scratched and opened last month. He previously underwent several resections over a decade ago and has not followed up with dermatology or oncology since then. He was applying triple antibiotic and a band-aid to the area. The wound measured 1.5cmx1.8cmx1cm and had asymmetrical borders. The wound base was non uniform color with black mosaic s

Breslow Classification

- Level 1: less than 0.76 mm thick
- Level 2: between 0.76– 1.50 mm
- Level 3: between 1.50 - 4.00 mm
- Level 3: exceed 4.00 mm in thickness

| Clark Level | Depth of infiltration |
|---|---|
| I | Confined to the epidermis |
| II | Into papillary dermis |
| III | To junction of papillary and reticular dermis |
| IV | Into the reticular dermis |
| V | Into the subcuticular fat |

**TREATMENT**

A punch biopsy revealed evidence of acral lentiginous melanoma with a Breslow depth of 3.5 cm and Clark level IV. A PET scan noted possible nodal metastasis, worrisome for neoplastic involvement. However, as there was a high risk of morbidity with surgical excision, the patient preferred to pursue treatment with medical oncology. He was also referred to pulmonary medicine as his PET scan showed uptake in mediastinal nodes.

## Discussion

There is often a delay in diagnosis of melanomas of the foot as they are commonly attributed to pathologies such as warts, moles or other benign conditions. This in turn leads to rapid disease progression with poor prognosis. Clinicians should have a high index of suspicion for malignancy in non healing foot wounds, particularly in the absence of diabetes or vascular disease. Atypical presentations include asymmetrical wounds with irregular borders or color variation.

Additionally, dermoscopy can aid in differentiating between benign and malignant alterations. A complete excisional biopsy should be performed whenever possible. Only patients with high-risk lesions should be considered for sentinel lymph node biopsy. It is recommended patients follow up with a team of providers at least every 6-12 months for 5 years and annually thereafter. Follow up should include complete total body skin exam and a melanoma-focused review of systems with symptom-directed workup. Lastly, a lymph node exam with attention to the primary regional draining nodal basins should also be performed.

## References

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