Dermatology Practical & Conceptual

# Cutaneous Spitzoid Melanoma in Childhood After Acute Lymphocytic Leukemia

Beatriz Ferreira do Prado Bassetti[1], Sergio Albertini Daiuto[1], Gilles Landman[2], Francisco Macedo Paschoal[3]

**1** Medical Student, Centro Universitário FMABC, Santo André, Brazil.
**2** Department of Pathology, Escola Paulista de Medicina, Universidade Federal de São Paulo, São Paulo, SP, Brazil
**3** Discipline of Dermatology, Centro Universitário FMABC, Santo André, Brazil.

**Keywords:** melanoma, Acute Lymphocytic Leukemia, Spitz Nevus, Skin Cancer

**Citation:** Bassetti BFP, Daiuto SA, Landman G, Paschoal FM. Cutaneous spitzoid melanoma in childhood after acute lymphocytic leukemia. *Dermatol Pract Concept.* 2022;12(3):e2022103. DOI: https://doi.org/10.5826/dpc.1203a103

**Accepted:** November 4, 2021; **Published:** July 2022



**Funding:** None.

**Competing interests:** None.

**Authorship:** All authors have contributed significantly to this publication.

**Corresponding author:** Sergio Albertini Daiuto, Discipline of Dermatology at Centro Universitário FMABC, Avenida Lauro Gomes, 2000 - Vila Sacadura Cabral, CEP: 09060-870, Santo André - São Paulo, Brazil E-mail: s.daiuto@gmail.com

## Introduction

Acute lymphocytic leukemia (ALL) is the most common childhood malignancy. It has a good prognosis but one-third of all childhood ALL deaths are due to toxicity or secondary malignancies. We report the case of a patient with a personal history of ALL who had cutaneous spitzoid melanoma at the beginning of puberty.

## Case presentation

A 13-year-old female patient from São Paulo, Brazil, presented, in 2015, a well-defined, erythematous, ulcerated brown nodule in the left temporal region, with a 1-year evolution (Figure 1A). She presents a personal history of ALL diagnosed in 2013, treated with chemotherapy. Dermoscopy shows polymorphic vessels, exulceration, hematic crusts, and chrysalis (Figure 1B). No specific finding of the melanocytic lesion was present.

The initial hypotheses were keratinocytic or vascular neoplasms being performed incisional biopsy for diagnosis. A histopathological analysis showed a neoplasm with cells arranged in nests, ample and eosinophilic cytoplasm, with oval or rounded nuclei and prominent nucleoli, whose diagnosis was infiltration by primary melanoma. Excisional biopsy confirmed the diagnosis of nodular, ulcerated, spitzoid, Clark V melanoma with tumor thickness (Breslow) of 4.7 mm (Figures 2). Surgical treatment with wide excision was performed, followed by adjuvant treatment with interferon alpha 2b at a dose of 6350,000 IU, subcutaneously, 3 times a week for 2 years, the only adjuvant treatment available at the time of diagnosis. The patient remained in oncological follow-up for 5 years and in remission of both neoplasms.

## Conclusions

This case report shows a remarkable clinical similarity with what was reported by Goldes et al. in 1984, whose initial

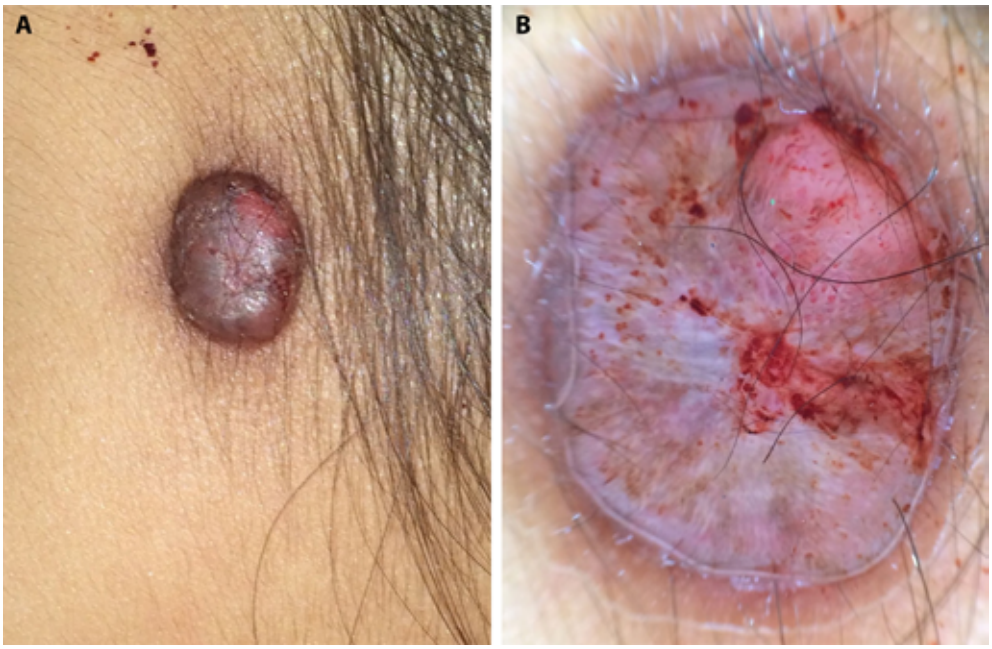


**Figure 1.** (A) Well-delimited, ulcerated brown nodule on the left temporal skin. (B) Dermoscopy showing polymorphic vessels, exulceration, hematic crusts and chrysalis streaks.

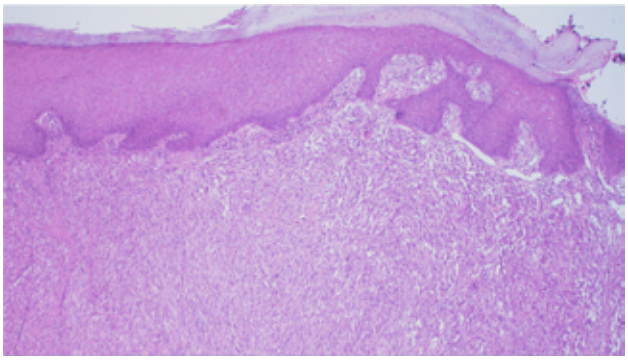

**Figure 2.** Melanocytic neoplasm characterized by proliferation of cells that are either epithelioid or fusiform with eosinophilic cytoplasm, whose nuclei have a moderate degree of polymorphism and prominent nucleoli, forming an extensive dermal lesion (H&Eeosin, 100x).

diagnosis, however, was Spitz nevus, but the patient died of metastatic melanoma [1]. The differential diagnosis between spitz nevus in its atypical presentation, such as aggressive spitz tumor of undetermined biological significance, and spitzoid melanoma is a major challenge [2]. Both may share findings such as fusiform melanocytes, prominent nucleoli, junctional nests, diameter greater than 10 mm, and high-grade nuclear atypia. The characteristics that favor the diagnosis of melanoma are greater depth of the lesion, involvement of reticular and subcutaneous dermis, mitosis in the deep dermis, nuclear and cellular pleomorphism, asymmetry and ill-defined limits, all of them present in our report.

Nevertheless, in certain situations only the development of metastasis will define the diagnosis. We can assume that the approach presented in the face of the diagnosis of spitzoid melanoma (wide excision and adjuvant immunotherapy) may have influenced the outcome of the present report. The most common secondary malignant neoplasms after ALL are lymphoreticular (acute myelocytic leukemia and Hodgkin disease), followed by endocrine, keratinocytic, and renal tumors. Immunosuppression by chemotherapy and radiotherapy is related to an increased risk of developing a subsequent neoplasm but not necessarily related to their causes. In addition to being rare in childhood, the occurrence of cutaneous melanoma as a secondary neoplasm after ALL, is even more uncommon, and this case in our knowledge is the second case reported in the literature. However, it should be considered mainly in the presence of a pigmented nodule on the face.

## References

1. Goldes J, Holmes S, Satz M, Cich J, Dehner L. Melanoma masquerading as Spitz nevus following acute lymphoblastic leukemia. *Pediatr Dermatol.* 1984;1(4):295-298. DOI: 10.1111/j.1525-1470.1984.tb01132.x. PMID: 6593699.2. Harms KL, Lowe L, Fullen DR, Harms PW. Atypical Spitz Tumors: A Diagnostic Challenge. *Arch Pathol Lab Med.* 2015;139(10):1263-1270. DOI: 10.5858/arpa.2015-0207-RA. PMID: 26414472.