https://doi.org/10.23925/1984-1840.2024v26a30 **Artigo Original /** *Original Article*

Cutaneous melanoma in the capital of the Amazon: profile of cases treated at a university dermatology outpatient clinic

Melanoma cutâneo em capital da Amazônia: perfil de casos atendidos em ambulatório universitário de dermatologia

Sarah Maria de Lima Faro,[1] Carlos André Chagas Moraes,[1] Caio Araujo Martins,[1] Norberto Jorge Kzan de Souza Neto,[1] Diego de Sousa Sena,[1] Geovana Helena Lira Ribeiro de Andrade,[1] Renata Mie Oyama Okajima[1]

ABSTRACT

Introduction: Melanoma is a type of cancer derived from melanocytic cells, the most aggressive and lethal among skin cancers. The research's purpose was to characterize the epidemiological profile of patients diagnosed with melanoma at the Dermatology Service of the Federal University of Pará. **Methods**: An observational, cross-sectional and retrospective analytical study was carried out, based on information from medical records and histopathological reports of patients with confirmed diagnoses by biopsy between January 2010 and December 2019. **Results**: 33 lesions of 32 patients were studied. North's region peculiarity was observed on the greater impairment of phototypes III, IV and V. Extensive superficial was the most frequent clinical type, as well as the region of the lower limbs, lesion diameter greater than 1 cm, Breslow stage V and vertical growth phase were the most prevalent. **Discussion:** A higher Breslow score was positively correlated with older age, nodular melanoma subtype, and vertical growth phase. A greater skin phototype was related to a greater diameter and location of the lesion on the lower limb. The clinical type of lesion had positive correlations with age group, site of lesion and phase of growth. **Conclusion**: Notably, the number of studies published on the disease in the region is not very expressive, probably due to the lower frequency of melanoma cases in the North region, which demonstrates the need for more studies on the subject in this region.

Keywords: melanoma; skin neoplasms; health profile; outpatient clinics hospital; Amazonian ecosystem.

RESUMO

Introdução: o melanoma é um tipo de câncer derivado de células melanocíticas, o mais agressivo e letal entre os cânceres de pele. **Objetivo:** caracterizar o perfil epidemiológico dos pacientes diagnosticados com melanoma no Serviço de Dermatologia da Universidade Federal do Pará. **Métodos**: foi realizado um estudo observacional, transversal e analítico retrospectivo, baseado em informações de prontuários e laudos histopatológicos de pacientes com diagnóstico confirmado por biópsia entre janeiro de 2010 e dezembro de 2019. **Resultados**: foram estudadas 33 lesões de 32 pacientes. A peculiaridade da Região Norte foi observada no maior comprometimento dos fototipos III, IV e V. Extensivo superficial foi o tipo clínico mais frequente, assim como a região dos membros inferiores, diâmetro da lesão maior que 1 cm, estágio V de Breslow e fase de crescimento vertical foram os achados mais prevalentes. **Discussão:** um escore de Breslow mais alto foi positivamente correlacionado com idade avançada, subtipo de melanoma nodular e fase de crescimento vertical. O maior fototipo de pele esteve relacionado ao maior diâmetro e localização da lesão no membro inferior. O tipo clínico da lesão teve correlações positivas com faixa etária, local da lesão e fase de crescimento. **Conclusão**: notavelmente, o número de estudos publicados sobre a doença na região é pouco expressivo, provavelmente devido à menor frequência de casos de melanoma na Região Norte, o que demonstra a necessidade de mais estudos sobre o tema nessa região.

Palavras-chave: melanoma; neoplasias cutâneas; perfil de saúde; ambulatório hospitalar; ecossistema amazônico.

[1] Universidade Federal do Pará (UFPA), Campus Belém – Belém (PA), Brasil.
Autora correspondente: Sarah Maria de Lima Faro
UFPA, Campus Belém, Rua Augusto Corrêa, 1, Guamá, CEP.: 66075-110 – Belém (PA), Brasil.
E-mail: sarahmfaro@gmail.com
Recebido em 19/12/2023 – Aceito para publicação em 13/11/2024.

INTRODUCTION

The term "melanoma" was originally used to describe malignant pigmented skin lesions. It is the most aggressive, most lethal and least frequent among skin cancers, being the one that most originates metastases among them. It is worth remembering that patients with non-melanoma skin cancer are at greater risk of developing this tumor.[1]

Melanoma, a multifactorial disease, has intrinsic and extrinsic risk factors. Among patient-related risk factors, skin phototype, personal and family history of melanoma, presence of multiple atypical or dysplastic nevi, and genetic factors are the key ones. Regarding environmental factors, intense or sporadic sun exposure causing blistering sunburns and artificial UVB tanning play important roles in the development of this cancer.[2]

In this context, Fitzpatrick skin types I and II are the most sensitive, meaning individuals with fair skin, hair, and eyes who easily burn and do not tan.[3] Therefore, early diagnosis is crucial. Histopathological examination is necessary for diagnostic confirmation, obtained through excisional biopsy of suspected melanoma lesions.

This study aimed to analyze the epidemiological profile of patients diagnosed with melanoma at the Dermatology Department of the Federal University of Pará (UFPA) from January 2010 to December 2019.

METHODS

This is an observational, cross-sectional and retrospective analytical study. The project was conducted in the Dermatology Department of UFPA, located at João de Barros Barreto University Hospital (HUJBB), based on medical records and histopathological reports of patients diagnosed with cutaneous melanoma by the department between January 2010 and December 2019.

Patients over 18 years of age who had a confirmed diagnosis of melanoma through histopathological examination were included in the study. Those without histopathological confirmation and whose medical records lacked the basic information for the study were excluded from the research.

Epidemiological data of the patients were collected, including age, place of origin, gender, and skin phototype using the Fitzpatrick classification. For comparison purposes, ages were categorized into five groups: less than or equal to 50 years, 51 to 60 years, 61 to 70 years, 71 to 80 years, and 81 to 100 years, further divided into elderly and non-elderly. Place of origin was classified in metropolitan area and interior of the state. Among the collected data, the clinical type of melanoma was identified, based on both histopathological report results and lesion descriptions. This classification included superficial spreading, nodular, acral, and malignant lentigo types.

Additional clinical data collected included reported signs from medical records, such as lesion location, duration of evolution from onset to consultation, and lesion diameter. Histopathological data collected included tumor thickness by the Clark level and the Breslow thickness, along with the growth phase of the tumor, categorized into horizontal and vertical growth. The data were stored in Microsoft® Excel 2016.

A descriptive analysis of the sample's characteristics was conducted, including frequency, percentage, mean, standard deviation, median, interquartile range (p 25% - p 75%), and a 95% confidence interval. Quantitative variables (age in years, duration of lesion in months, and time between consultation and diagnosis in days) were initially subjected to the Shapiro-Wilk test to evaluate the normality of the distribution.

For comparative analysis among categorical variables, the G Test was applied, a non-parametric test for two independent samples, similar in all aspects to the Chi-Square test. For comparative analysis of continuous variables, the Mann-Whitney Test was used, a non-parametric test designed for comparing two independent samples. The Spearman coefficient was also utilized to correlate variables. All analyses were performed using Bioestat 5.3 software, maintaining a significance level of 5% ($p \leq 0.05$).[4]

The project was submitted to and approved by the Research Ethics Committee of HUJBB. The risk to research subjects involved the confidentiality and privacy of the information obtained from the medical records. The main benefit for the research subjects is social in nature, as a better understanding of the severity of melanoma will result in better patient care, decrease in the incidence of the disease, and better therapeutic outcomes.

RESULTS

In the present study, 32 individuals who were attended by the Department of Dermatology at the Federal University of Pará between 2010 and 2019 and received a diagnosis of melanoma were included. Among these individuals, a total of 33 injuries were investigated. As for origin, 81.8% were from the state of Pará; 57.6% were from the metropolitan region of Belém, while 18.2% and 27.3% were unspecified, respectively.

When evaluating the epidemiological characteristics of these cases, it is observed that 69.7% occurred among women, with a mean age of 63.2 (± 16.4) years, ranging from 18 to 97 years. The most frequent age group was 51 to 60 years 33.3% and 54.5% of patients were elderly. Phototype III was the most common, with 39.4% as detailed in Table 1.

As for the clinical characteristics of the cases, it was shown that the majority lesions were in the form of plates 42.4%. Among other less frequent formats were said tumor 24,2%; stain 18,2%, others 9,1% and nodule 6,1%.

In addition, it was observed that most of the lesions were located on the lower limbs (36.4%), measuring more than 1 cm in diameter (87.9%), between the most frequent symptoms. the most frequent clinical type was extensive superficial, accounting for 42.4% of cases.

Regarding the histopathological characterization of the lesions, the most frequent Clark levels were I and IV, with Breslow stage V being the most common, accounting for 45.5% of the cases. The vertical growth phase was the most prevalent, representing 66.7% of the cases, as shown in Table 1.

Table 1. Epidemiological, clinical and histopathological characterization of confirmed patients with melanoma treated at the Dermatology Service of the Federal University of Pará from 2010 to 2019.

Variables	Frequency (n. 33)	Percentage (%)	IC 95%
Gender			
Female	23	69.7	54.5 - 84.8
Male	10	30.3	15.2 - 45.5
Age (years)			
Average (± sd)	63.2 (± 16.4)		57.1 - 68.5
Median (p 25% - 75%)	65.0 (54.0 - 64.0)		57.0 - 69.0
Age group			
< 50 years	4	12.1	3.4 - 28.2
51 a 60 years	11	33.3	18.0 - 51.8
61 a 70 years	8	24.2	11.1 - 42.3
71 a 80 years	5	15.1	5.1 - 31.9
81 a 100 years	5	15.1	5.1 - 31.9
Elderly			
< 60 years	15	45.5	27.3 - 60.6
≥ 60 years	18	54.5	39.4 - 72.7
Phototype			
Phototype I	1	3.0	0.0 - 9.1
Phototype II	3	9.1	0.0 - 21.2
Phototype III	13	39.4	24.2 - 54.5
Phototype IV	7	21.2	6.1 - 36.4
Phototype V	7	21.2	2.91 - 36.4
Uninformed	2	6.1	0.0 - 15.2
Location Injury			
Head and neck	2	6.1	0.0 - 15.2
Stem	11	33.3	18.2 - 51.5
Upper limbs	8	24.2	9.1 - 39.4
Lower members	12	36.4	21.2 - 51.5
Clinical type of melanoma			
Superficial extensive	14	42.4	25.5 - 60.8
Nodular	11	33.4	18.0 - 51.8
Acral	7	21.2	9.0 - 38.9
Malignant lentigo	1	3.0	0.1 - 15.8
Diameter			
0.6 cm to 1.0 cm	2	6.1	0.0 - 15.2
> 1,0 cm	29	87.9	75.8 - 97.0
Uninformed	2	6.1	0.0 - 15.2

Continue

Variables	Frequency (n. 33)	Percentage (%)	IC 95%
Clark level			
Level I	12	36.4	21.2 - 51.5
Level II	1	3.0	0.0 - 9.1
Level III	4	12.1	3.0 - 24.2
Level IV	12	36.4	21.2 - 51.5
Level V	3	9.1	0.0 - 21.2
Uninformed	1	3.0	0.0 - 9.1
Breslow index			
Stage I	9	27.3	13.3 - 45.5
Stage II	1	3.0	0.1 - 15.8
Stage III	3	9.1	1.9 - 24.3
Stage IV	0	0	0
Stage V	15	45.5	28.1 - 63.6
Uninformed	5	15.1	5.11 - 31.9
Growth stage			
Horizontal	11	33.3	18.0 - 51.8
Vertical	22	66.7	48.2 - 82.0

sd. Standard Deviation; IC. Confidence Interval; p. Percentile.
Source: Research Protocol.

At the time of the first appointment, the patients reported that the mean time for the appearance of the lesion was 54.8 months, with a standard deviation of ± 65.3 months and a median of 24.0 (6.0 - 120.0) months. The average time between performing a biopsy of the lesion in the specialized service and releasing the histopathological result was 19.3 days, with a standard deviation of ± 12.6 days and a median of 18.0 days.

By correlating the epidemiological clinical profile with the Breslow thickness, statistically significant differences were observed in relation to age group and elderly. Correlations with sex, age, phototype and location of the lesion were not statistically significant. The correlation between Breslow index with clinical type of melanoma and tumor growth stage were significantly relevant as detailed in Table 2.

Table 2. Comparative analysis between the Breslow Indices and clinical-epidemiological and histopathological profile of reported cases with melanoma attended at the Dermatology Service of the Federal University of Pará from 2010 to 2019.

Variables	Breslow Index Stage I (n = 9)	Breslow Index Stage II (n = 1)	Breslow Index Stage III (n = 3)	Breslow Index Stage V (n = 15)	p - valor[a]	r - valor
Gender						
Female	2 (22.2)	0	1 (33.3)	5 (33.3)	0.9028	- 0.0221
Male	7 (77.8)	0	2 (66.7)	10 (66.7)		
Age groups						
≤ 50 years	2 (22.2)	0	0	2 (13.3)	0.0122*	0.4312
51 to 60 years	4 (44.4)	0	2 (66.7)	1 (6.7)		
61 to 70 years	2 (22.2)	0	0	5 (33.3)		
71 to 80 years	1 (11.1)	1 (100.0)	0	3 (20.0)		
81 to 100 years	0	0	1 (33.3)	4 (26.7)		
Elderly						
< 60 years	6 (66.7)	0	2 (66.7)	3 (20.0)	0.0044*	0.4831
≥ 60 years	3 (33.3)	1 (100.0)	1 (33.3)	12 (80.0)		
City						
Metropolitan region	6 (66.7)	0	3 (100.0)	8 (80.0)	0.8592	0.0321
Interior of the state	2 (22.2)	1 (100.0)	0	2 (20.0)		
Uninformed	1 (11.1)	0	0	0		
Phototype						
I	0	0	1 (33.3)	0	0.9469	- 0.0121
II	3 (33.3)	0	0	0		
III	3 (33.3)	1 (100.0)	0	8 (53.3)		
IV	1 (11.1)	0	1 (33.3)	4 (26.7)		
V	2 (22.2)	0	1 (33.3)	2 (13.3)		
Uninformed	0	0	0	1 (6.7)		
Injury site						
Head and neck	2 (22.2)	0	0	0	0.5285	0.1138
Stem	3 (33.3)	0	1 (33.3)	6 (40.0)		
Upper limbs	3 (33.3)	0	1 (33.3)	2 (13.3)		
Lower limbs	1 (11.1)	1 (100.0)	1 (33.3)	7 (46.7)		
Clinical type of melanoma						
Superficial extensive	8 (88.9)	0	0	2 (13.3)	0.0047*	0.4800
Nodular	0	0	2 (66.7)	9 (60.0)		
Acral	0	1 (100.0)	1 (33.3)	4 (26.7)		
Malignant lentigo	1 (11.1)	0	0	0		
Growth stage						
Horizontal	7 (77.8)	0	0	0	< 0,0001*	0.7546
Vertical	2 (22.2)	1 (100.0)	3 (100.0)	15 (100.0)		

a. Test G; b. Spearman's r; *p - value ≤ 0.05.
Source: Research Protocol.

The association between lesion diameter and skin phototype proved to be significantly relevant, with phototype III being more frequent in diameters greater than 1 cm (44.8%).

The correlations between lesion diameter and time, as well as with the clinical type of melanoma, were not significant, as shown in Table 3.

Table 3. Association between time of lesion, skin phototype and type of melanoma with lesion diameter of cases diagnosed with melanoma treated at the Dermatology Service of the Federal University of Pará from 2010 to 2019.

Variables	Diameter ≤ 1 cm (n. 2)	Diameter > 1 cm (n. 29)	p - valor	r - valor[b]
Injury time (months)				
Avarege (± sd)	36.0 (± 0.00)	55.7 (± 66.8)	0.3334[a]	-
Median (p 25% - 75%)	36.0 (36.0 - 36.0)	18.0 (5.0 - 120.0)		
Phototype				
I	0	1 (3.4)		
II	1 (50.0)	2 (6.9)		
III	0	13 (44.8)	0.0370*	0.3644
IV	0	6 (20.7)		
V	0	7 (24.1)		
Uninformed	1 (50.0)	0		
Clinical type of melanoma				
Superficial extensive	2 (100.0)	12 (41.4)	0.9114	0.0201
Nodular	0	10 (34.5)		
Acral	0	6 (20.7)		
Malignant lentigo	0	1 (3.4)		

a. Mann-Whitney Test; b. Spearman's Correlation Coefficient; sd. Standard Deviation; p. Percentile; *p < 0.05.
Source: Research Protocol.

As shown in Table 4, the relationships between age range and skin phototype with location of lesions were statistically significant.

Table 4. Association between age group and skin phototype with lesion site in cases diagnosed with melanoma treated at the Dermatology Service of the Federal University of Pará from 2010 to 2019.

Variables	Head and neck (n. 2)	Stem (n. 11)	Upper limbs (n. 8)	Lower limbs (n. 12)	p - valor	r - valor[a]
Age groups						
≤ 50 years	0	4 (36.4)	0	0		
51 to 60 years	2 (100.0)	3 (27.3)	4 (50.0)	2 (16.7)		
61 to 70 years	0	3 (27.3)	1 (12.5)	4 (33.4)	0.001*	0.5509
71 to 80 years	0	1 (9.1)	2 (25.0)	2 (16.7)		
81 to 100 years	0	0	1 (12.5)	4 (33.4)		
Phototype						
I	0	1 (100.0)	0	0		
II	1 (50.0)	1 (9.1)	1 (12.5)	0		
III	0	8 (72.7)	2 (25.0)	3 (25.0)	0.0435*	0.3535
IV	0	1 (9.1)	2 (25.0)	4 (33.4)		
V	1 (50.0)	0	2 (25.0)	4 (33.4)		
Uninformed	0	0	1 (12.5)	1 (8.34)		

a. Spearman's Test; p. Percentile; *p < 0.05; r. Spearman's Correlation Coefficient.
Source: Research Protocol.

Correlations between clinical type of melanoma and age groups were statistically significant, as well as correlations between elderly, lesion location and growth phase respectively.

Associations between melanoma types and sex, city and skin phototype were not relevant, as shown in Table 5.

Table 5. Association between gender, age group, elderly, city, phototype, lesion site and growth phase with clinical type of cases diagnosed with melanoma treated at the Dermatology Service of the Federal University of Pará from 2010 to 2019.

Variables	Superficial extensive (n = 14)	Nodular (n = 11)	Acral (n = 7)	Malignant lentigo (n = 1)	p - valor	r - valor[a]
Gender						
Female	11 (78.6)	7 (63.6)	5 (71.4)	0	0.3337	0.1737
Male	3 (21.4)	4 (36.4)	2 (28.6)	1 (100.0)		
Age groups						
≤ 50 years	3 (21.4)	1 (9.1)	0	0		
51 to 60 years	7 (50.0)	3 (27.3)	1 (14.3)	0		
61 to 70 years	3 (21.4)	3 (27.3)	1 (14.3)	1 (100.0)	0.0007*	0.5616
71 to 80 years	1 (7.1)	3 (27.3)	1 (14.3)	0		
81 to 100 years	0	1 (9.1)	4 (57.1)	0		
Elderly						
< 60 years	10 (71.4)	4 (36.4)	1 (14.3)	0	0.0043*	0.4843
≥ 60 years	4 (28.6)	7 (63.6)	6 (85.7)	1 (100.0)		
City						
Metropolitan region	6 (42.8)	7 (70.0)	5 (71.4)	1 (100.0)		
Interior of the state	4 (28.6)	0	1 (14.3)	0	0.7965	- 0.467
Uninformed	4 (28.6)	3 (30.0)	1 (14.3)	0		
Phototype						
I	0	1 (9.1)	0	0		
II	3 (21.4)	0	0	0		
III	5 (35.7)	5 (45.4)	2 (28.6)	1 (100.0)	0.3619	0.1640
IV	1 (7.1)	3 (27.3)	3 (42.9)	0		
V	4 (28.6)	1 (9.1)	2 (28.6)	0		
Uninformed	1 (7.1)	1 (9.1)	0	0		
Injury Site						
Head and neck	2 (14.3)	0	0	0		
Stem	6 (42.9)	5 (45.4)	0	0	0.0011*	0.5422
Upper limbs	4 (28.6)	3 (27.3)	0	1 (100.0)		
Lower limbs	2 (14.3)	3 (27.3)	7 (100.0)	0		
Growth stage						
Horizontal	11 (78.6)	0	0	0	0.0001*	0.7530
Vertical	3 (21.4)	11 (100.0)	7 (100.0)	1 (100.0)		
Clark Level						
Level I	11 (78.6)	0	0	1 (100.0)		
Level II	1 (7.1)	0	0	0		
Level III	0	2 (18.7)	2 (28.6)	0	0.003*	0.361
Level IV	0	8 (72.2)	4 (57.1)	0		
Level V	2 (14.3)	1 (9.1)	0	0		
Uninformed	0	0	1 (14.3)	0		

Continue

Variables	Superficial extensive (n = 14)	Nodular (n = 11)	Acral (n = 7)	Malignant lentigo (n = 1)	p - valor	r - valor[a]
Breslow index						
Stage I	8 (71.5)	0	0	1 (100.0)	0.005*	0.480
Stage II	0	0	1 (14.3)	0		
Stage III	0	2 (18.7)	1 (14.3)	0		
Stage IV	0	0	0	0		
Stage V	2 (14.3)	9 (81.3)	4 (57.1)	0		
Uninformed	4 (28.6)	0	1 (14.3)	0		

a. Spearman's Correlation Coefficient; *p - value ≤ 0.05.
Source: Research Protocol.

DISCUSSION

The study involved analyzed the medical records of 32 patients over a ten-year period. It is important to emphasize that the study data were compromised due to incomplete and scarce records in the service, as is common in Latin America and Brazil. This occurs because melanoma is not a notifiable disease and studies that use secondary data such as this one are subject to information bias.[5-7]

Differences in skin color and number of cases between studies from different regions can be explained by the ethnic composition of the Brazilian population. The North region has the highest percentage of individuals who identify themselves as brown (72.2%) and the lowest percentage who identify as white (19.1%), with blacks representing 7.3%.[8] These differences in ethnic composition between regions could explain the variation in cases of melanoma incidence.

In the present study, 81.8% of the patients were from the state of Pará and 57.6% were from the metropolitan region of Belém. This indicates that, although the Department primarily serves the metropolitan region, a significant portion of patients came from the interior of the state. This could demonstrate the difficulty of accessing specialized services in rural cities, even in larger centers.

Cutaneous melanoma in this study was more prevalent in women (69.7%). This disparity between men and women may be attributed to female hormonal factors, behavioral factors such as clothing preferences and differences in the anatomical distribution of melanocytic nevi.[2,7, 9-13]

In this study, the mean age of patients was over 60 years (63.2 years). The standard deviation of the mean age was ± 16.4, indicating that the sample data are dispersed around the mean. This can be observed in the study, as the age of the patients ranged from 18 to 97 years.[14] Mean age is important because poor prognostic factors for melanoma were significantly more observed in older patients, while better prognostic factors were observed in younger patients.[15-18]

Regarding the diameters of the lesions, clinically, those greater than 1 cm were more frequent (87.9%), and in this group a longer time for the appearance of lesions was found. There was a statistically significant relationship between greater skin phototype and larger diameter of the lesion, with phototype III being more common in diameters greater than 1 cm. This indicates that despite worldwide recommendations for referring lesions larger than 6 mm to specialists for early diagnosis of melanoma, a significant portion of the patients in this study were diagnosed with lesion diameters greater than the ideally recommended size.[19] Skin color can also be correlated with the social and historical context of the country.[20]

It is noteworthy that only 9.1% of Brazilian cities had dermatologists, who served more than half of the Brazilian population, with uneven distribution favoring more populous cities and with a higher Human Development Index (HDI).[21] In addition, the lowest density of physicians, including dermatologists, was observed in the North region, particularly in the interior areas of the state.[22] This fact could contribute to late diagnoses of dermatological diseases that require specialized knowledge. Moreover, early diagnosis of melanoma leads to greater chances of cure and requires less invasive surgeries.[23]

In this study, 36.4% of the patients had primary tumor location in the lower limbs. In addition, there was a relevant relationship between the location of the lesion and age group, with the lower limbs being the most frequent location at more advanced ages. There was also a correlation between location and skin phototype, with phototype III being more prevalent on the trunk and phototypes IV and V more common on the lower limbs. Furthermore, the acral subtype was more frequent in the lower limbs. This is in line with literature data, as acral melanoma, located on the limbs, tends to be more common in the lower limbs of black individuals in their fifth decade of life, as found in the study.[24]

The most common clinical subtype found in this study was superficial extensive melanoma. There was also a statistically significant relationship between clinical subtype, age group and location of the lesion. The superficial extensive subtype was more frequent among individuals aged 51 to 60 years and in the trunk. These findings are consistent with the literature, as this subtype of melanoma typically affects individuals in their fifth decade of life and is more frequently located on the trunk and lower limbs.[24]

Regarding tumor depth, the vertical growth phase was the most frequent in this study. In addition, there was a statistical relationship between the vertical growth phase and higher Breslow stages, which is in line with the literature, as these stages represent deeper tumors. The relationship was also present between growth phase and clinical subtype, as well as between Breslow and clinical subtype.

In the superficial spreading subtype, the horizontal growth phase and stage I were the most common, while in the nodular subtype, the vertical growth phase and stage V predominated. This finding is consistent with other studies, as the superficial spreading subtype tends to have a prolonged horizontal growth phase, while the other two subtypes show early vertical growth.[24]

In this study, Breslow stage V, which represents tumor thickness greater than 3 mm, was the most prevalent and corresponds to the most severe stage. Furthermore, greater Breslow thicknesses had statistically relevant correlations with more advanced age groups. These findings are in line with the literature, as histologically worse melanomas tend to be thicker with advancing age.[17]

CONCLUSION

A survey on epidemiological and histopathological clinical analysis showed a predominance in the age group above 50 years, in agreement with data in the literature. There was a higher prevalence of phototypes III, IV and V, which was attributed to the fact that they are the predominant phototypes in the state of Pará.

The superficial extensive clinical subtype, which notably has a larger lesion diameter as found in the study, was the most prevalent among the studied population, as well as in the literature. Furthermore, the most frequently found location was in the lower limbs, as it is related to the prevalence of higher skin phototypes among study participants.

The most common histological growth phase was vertical, and the most recurrent or deepest Breslow stage. The highest Breslow index was also related to older ages, as well as to more aggressive growth subtypes. Larger lesion diameter and more frequent location in the lower limbs were found in patients with darker skin phototypes.

The time between the appearance of the melanoma and the consultation was 54.8 months and the time between the consultation and the histopathological diagnosis was 19.3 days, which suggests the hypothesis that there may be difficulty in accessing specialized health services, poor availability of medical specialists and failure to recognize suspicious lesions in primary health care.

The brightness between the time of evolution and depth of the tumor was not significant.

With this research, we found that the number of studies published on the disease in the region is still not very expressive. Thus, it is suggested that more studies be carried out in the area so that the disease and its diagnostic suspicion criteria are increasingly known among patients and health professionals. In this way, there is the social benefit of early diagnosis of melanoma, allowing its greater chance of cure.

Acknowledgements

We extend our heartfelt gratitude to the dermatology residents at HUJBB for their continuous support and assistance throughout this journey. Additionally, we express our appreciation to the staff members of the Dermatology Service at UFPA for their unwavering dedication, sparing no effort to ensure the completion of our work.

Conflicts of interest

The authors declare no conflicts of interest.

REFERÊNCIAS

1. Gilli IO, Zanoni AC, Andrade DP, Andrade DAS. Cutaneous melanoma diagnosis delay: socioeconomic and demographic factors influence. Rev Assoc Med Bras (1992). 202221;68(10):1405-9. doi: 10.1590/1806-9282.20220369.
2. Ferreira T, Santos IDAO, Oliveira AF, Ferreira LM. Estudo retrospectivo dos pacientes portadores de melanoma cutâneo atendidos na Universidade Federal de São Paulo. Rev Col Bras Cir. 2018;45(4):1-7. doi: 10.1590/0100-6991e-20181715.
3. Ayres M. Elementos de bioestatística: a seiva do açaizeiro. Belém: Editora Belém; 2010.
4. Instituto Nacional de Câncer José Alencar Gomes da Silva (INCA). Estimativa 2012: incidência de câncer no Brasil [Internet]. Rio de Janeiro: Coordenação Geral de Ações Estratégicas, Coordenação de Prevenção e Vigilância; 2011 [acesso em 30 out. 2023]. Disponível em: https://bvsms.saude.gov.br/bvs/publicacoes/inca/Estimativa_2012.pdf
5. Drumond EF, Machado CJ, Vasconcelos MR, França E. Utilização de dados secundários do SIM, Sinasc e SIH na produção científica brasileira de 1990 a 2006. Rev Bras Estud Popul. 2009;26(1):7-19. doi: 10.1590/S0102-30982009000100002.
6. Vazquez VL, Silva TB, Vieira MA, Oliveira ATT, Lisboa MV, Andrade DAP, et al. Melanoma characteristics in Brazil: demographics, treatment, and survival analysis. BMC Res Notes. 2015;8(4):1-9. doi: 10.1186/s13104-015-0972-8.
7. Wainstein AJA, Duprat Neto JP, Enokihara MY, Brechtbühl ER, Riccardi F, Landman G, et al. Demographic, clinical, and pathologic features of patients with cutaneous melanoma: final analysis of the Brazilian Melanoma Group Database. JCO Glob Oncol. 2020;(6):575-82. doi: 10.1200/JGO.20.00005.
8. IBGE. Pesquisa Nacional por Amostra de Domicílios Contínua [Internet]; [revisado em 26 maio 2020]; [acesso em 30 out. 2023]; Disponível em: https://biblioteca.ibge.gov.br/visualizacao/livros/liv101707_informativo.pdf
9. Bertoldi MB, Bastos CAS, Sampaio CL, Wroblevski EH, Purim KSM. melanoma cutâneo em um Hospital Universitário, 2001-2016. RBC. 2020;66(3):9-11. doi: 10.32635/2176-9745.RBC.2020v66n3.911.
10. Purim KSM, Bonetti JPC, Silva JYF, Marques LB, Pinto MCS, Ribeiro LC. Características do melanoma em idosos. Rev Col Bras Cir

2020;47(e20202441):1-8. doi: 10.1590/0100-6991e-20202441.
11. Neves PLA. Melanoma cutâneo: aspectos histológicos e clínicos dos casos diagnosticados no Hospital das Clínicas da Universidade Federal de Minas Gerais no período de 1995 a 2017 [dissertação]. Belo Horizonte: Universidade Federal de Minas Gerais; 2018.
12. Simoni B. Epidemiologia do melanoma cutâneo primário em residentes de uma cidade no sul do Brasil, 2007-2015 [monografia]. Passo Fundo: Universidade Federal da Fronteira Sul; 2018.
13. Lowe GC, Saavedra A, Reed KB, Velazquez AI, Dronca RS, Markovic SN, et al. Increasing incidence of melanoma among middle-aged adults: an epidemiologic study in Olmsted County, Minnesota. Mayo Clin Proc Digit Health. 2014;89(1):52-9. doi: 10.1016/j.mayocp.2013.09.014.
14. Dantas RA. Engenharia de avaliações: uma introdução à metodologia científica. 3ª ed. São Paulo: Pini; 2011.
15. Rutkowski P, Nowecki ZI, Zdzienicki M, Michej W, Symonides M, Rosinska M, et al. Cutaneous melanoma with nodal metastases in elderly people. Int J Dermatol. 2010;49(8):907-13. doi: 10.1111/j.1365-4632.2009.04386.x.
16. Balch CM, Thompson JF, Gershenwald JE, Soong S, Ding S, McMasters KM, et al. Age as a predictor of sentinel node metastasis among patients with localized melanoma: an inverse correlation of melanoma mortality and incidence of sentinel node metastasis among young and old patients. Ann Surg Oncol. 2014;21:1075-81. doi: 10.1245/s10434-013-3464-x.
17. Tas F, Erturk K. Patient age and cutaneous malignant melanoma: elderly patients are likely to have more aggressive histological features and poorer survival. Mol Clin Oncol. 2017;7(6):1083-8. doi: 10.3892/mco.2017.1439.
18. Yuan T-A, Lu Y, Edwards K, Jakowatz J, Meyskens FL, Liu-Smith F. Race-, age-, and anatomic site-specific gender differences in cutaneous melanoma suggest differential mechanisms of early- and late-onset melanoma. Int J Environ Res Public Health. 2019;16(6):908-22. doi: 10.3390/ijerph16060908.
19. McCourt C, Dolan O, Gormley G. Malignant melanoma: a pictorial review. Ulster Med J. 2014;83(2):103-10.
20. Eid RT, Alchorne MMA. Câncer na pele negra. Rev Soc Bras Clín Méd. 2011;9(6):418-22.
21. Schmitt JV, Miot HA. Distribuição dos dermatologistas no Brasil segundo a região geográfica, população e IDH dos municípios: um estudo ecológico. An Bras Dermatol. 2014;89(6):1017-9.
22. Scheffer MC, Cassenote AJ, Guilloux AGA, Biancarelli A, Miotto B, Mainardi G. Demografia médica do Brasil 2018. São Paulo: FMUSP, CFM, Cremesp; 2018. p. 44-55.
23. Oliveira Filho RS, Oliveira DA, Souza MC, Silva M, Brandão MDC. Considerar diâmetro apenas maior que 6mm como suspeita de malignidade de melanoma pode prejudicar pacientes. Einstein. 2015;13(4):506-9. doi: 10.1590/S1679-45082015AO3436.
24. Azulay RD. Neoplasias melanocíticas e dermatoscopia. In: Azulay RD. Dermatologia. 6ª ed. Rio de Janeiro: Guanabara Koogan; 2013.

Como citar este artigo:
Faro SML, Moraes CAC, Martins CA, Souza Neto NJK, Sena DS, Andrade GHLR, Okajima RMO. Melanoma cutâneo em capital da Amazônia: perfil de casos atendidos em ambulatório universitário de dermatologia. Rev Fac Ciênc Méd Sorocaba. 2024;26:e64874. doi: 10.23925/1984-1840.2024v26a30.