Population and registry-based data generation of key epidemiological data for cutaneous melanoma in Colombia

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Background and rationale

Melanoma is often thought of as a "disease of high-income countries" and a "disease of fair-skinned people." Therefore, melanoma in low- and middle-income countries is rarely studied. While it is true that the incidence of melanoma in these countries is lower, knowledge about the characteristics of melanoma in these populations is very limited.

According to the Global Cancer Observatory of the International Agency for Research on Cancer in 2020, 324,635 cases of melanoma and 57,043 deaths from melanoma were reported worldwide in both sexes and all ages. In South America, an incidence of 16,015 cases and 4,519 deaths were reported for all ages and in both sexes.[1]

South America is a very diverse continent, both in climates and skin types. All skin types described by Fitzpatrick are present, albeit in different proportions in the different areas, with larger proportions of skin types I-III in the south of the continent.[2]

As melanoma is an understudied disease and potential risk factors exist in the region, it is important to obtain better, precise, and unbiased information and knowledge regarding characteristics of melanomas in Colombia.

Objective

- To describe the burden of cutaneous melanoma in Bucaramanga, Colombia, from a population perspective in terms of global and sex-specific incidence and mortality, anatomical location, morphological type, stage, and overall and relative survival in Colombia served by the participating cancer registry

Methodology

This was a retrospective cohort, high-resolution population study based on the Bucaramanga population cancer registry, in which information was collected from all residents of the Bucaramanga metropolitan area (Bucaramanga, Floridablanca, Girón, and Piedecuesta, total population 1,111,999 (according to the 2018 Population Census of the National Administrative Department of Statistics – DANE) with newly diagnosed invasive cancer.

All patients diagnosed with invasive cutaneous melanoma between 2010 and 2014 as part of the ICD-10 44,1 to 44,9 were included. In cases where incomplete information was found, it was completed by reviewing medical files and pathology reports when possible.

The date of incidence was defined as the date of issuance of the anatomopathological report when available, otherwise the date of clinical diagnosis was used. All patients underwent vital status monitoring by linking to official databases.

Results

The Bucaramanga Metropolitan Area database contained records of a total of 113 melanoma patients diagnosed from 2010-2014 (Table 1).

Table 1. Summary of the characteristics of the residents of the Bucaramanga metropolitan area diagnosed with a melanoma from 2010-2014

Characteristics	N (% of total of 113)
Sex	
Male	55 (48.6)
Female	58 (51.3)
Age	
Median (RIQ): 67 (5-97) years	
Anatomical subsite	
Skin of head and neck	17 (15.0)
Lip	1 (0.8)
Eyelid	1 (0.8)
External ear	4 (3.5)
Other parts, face	4 (3.5)
Scalp and neck	7 (6)
Trunk	24 (21.2)
Upper limb including shoulder	15 (13.2)
Lower limb including hip	48 (42.4)
Skin not otherwise specified	9 (7.9)
Morphological subtype	
Amelanotic melanoma	1 (0.9)
Superficial spreading melanoma	11 (9.7)
Epithelioid cell melanoma	4 (3.5)
Acral lentiginous melanoma	21 (18.6)
Lentigo maligna melanoma	10 (8.9)
Nodular melanoma	26 (23.0)
Not otherwise specified	40 (35.4)
AJCC stage	
I	3 (2.6)
II	0 (0.0)
III	2 (1.7)
IV	35 (30.9)
Unknown	73 (64.6)
Medical history without stage information	21 (18.5)
Medical history missing when reviewing	52 (46.0)
T-stage	
T1	32 (28.3)
T2	24 (21.2)
T3	9 (7.9)
T4	11 (9.7)
TX or missing T	37 (32.7)
N-stage	
N0	11 (9.7)
N1	9 (7.9)
N2	5 (4.4)
N3	5 (4.4)
NX or missing N	83 (73.4)
M-stage	
M0	5 (4.0)
M1	35 (31.0)
MX or missing M	74 (64.0)

IQR, interquartile range.

The crude incidence rate per 100,000 person-years of melanoma in Bucaramanga in the studied period was 2.08 (Table 2)

Table 2. Melanoma incidence rates 2010-2014

	Mean annual melanoma incidence rates 2010-2014	
	Crude rate	Age-adjusted (SEGI world standard population)
Males	2.12	2.09
Females	2.01	1.67
Total	2.08	1.86

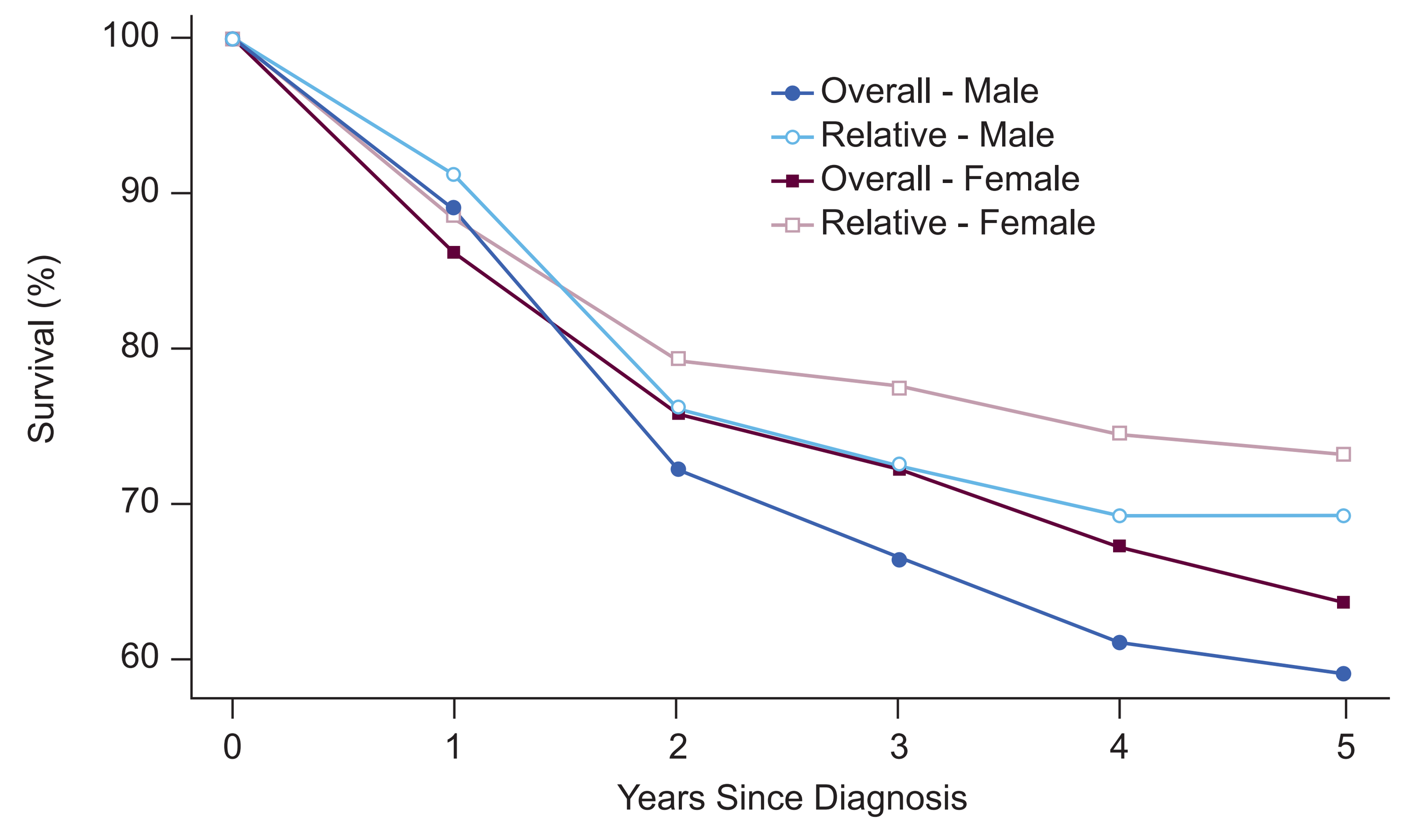
Crude melanoma mortality rate per 100,000 person-years in Colombia in the period 2010-2014 was 0.66 (Table 3)

Table 3. Melanoma mortality rates 2010-2014

	Crude	Age-adjusted SEGI
Males	0.71	0.68
Females	0.61	0.51
Total	0.66	1.59

The 5-year overall survival of cutaneous melanoma in Bucaramanga was 61.6%, with slightly lower survival for males (59.3%) compared with females (63.8%) (Figure 1)

Figure 1. Sex-specific overall and relative survival up to 5 years after diagnosis for melanoma patients diagnosed between 2010 and 2015 in Bucaramanga metropolitan area



Conclusions

The incidence of melanoma in the metropolitan area of Bucaramanga (Colombia) is relatively small, but mortality is high, and survival is low compared to international standards. Improving the quality and availability of data on malignant diseases in the population registries is necessary to support decision-making related to the diagnosis and treatment of these pathologies and thus impact patient outcomes.

References

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Disclosure

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