drugs that affect the nervous system might contribute to the onset of BP, but additional studies are required to clarify this association.

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Table I. Study demographics

Characteristics	Value*
Sex	
Male	118 (71.1)
Female	48 (28.9)
Age, y, median (range)	51 (6-78)
Region	
Europe	77 (46.4)
North America	49 (29.5)
Africa	20 (12.0)
Asia	9 (5.4)
South America	6 (3.6)
Oceania	5 (3.0)
Education	
Without primary	1 (0.6)
Primary	11 (6.6)
Secondary	70 (42.2)
University	84 (50.6)
History of skin cancer	
Absent	127 (84.1)
Nonmelanoma skin cancer	20 (13.2)
Melanoma	4 (2.6)
Data missing	15
Phototype	
I	5 (3.1)
II	71 (43.6)
III	63 (38.7)
IV	23 (14.1)
V	1 (0.6)
Missing	3
No. organs transplanted, median (range)	1 (1-2)
Organs transplanted	
Kidney	79 (47.6)
Lung	12 (7.2)
Heart	31 (18.7)
Liver	33 (19.9)
Bone marrow	13 (7.8)
Pancreas	1 (0.6)

*Values are n (%) except where indicated.

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Sun exposure risks in athletes who were recipients of solid organ and bone marrow transplants

To the Editor: In recent decades, there has been an up to 3 times increase in incidence of skin cancer in the world population.[1] It is estimated that solid organ transplant recipients receiving immunosuppressive therapy have a 3-5 times higher risk of developing neoplastic diseases, such as cutaneous nonmelanoma carcinomas squamous cell carcinoma (SCC) and basal cell carcinoma (BCC), than the general population.[2] Risk factors that contribute to neoplastic development in transplant patients include the following: age at transplant, intensity and duration of immunosuppression, history of sun exposure, history of skin cancer before transplant, and frequency of sunburn in childhood. The main predictors of sunburn are skin phototype, age, sex, and education level.[3]

Athletes who practice outdoor sports and are recipients of bone marrow or organ transplant are possibly at higher risk of developing photo-induced

Table II. Knowledge about sun exposure

Knowledge (K) items	Correct	No. evaluated	No. correct (%)
K.1. Using tanning beds before 30 years of age increases your risk of developing melanoma by 75%.	True	151	126 (83)
K.2. Ultraviolet radiation causes the skin to age more quickly and might result in the development of different types of skin cancers.	True	151	144 (95)
K.3. You are not at any risk of suffering from the effects of solar radiation if you stay in the shade.	False	152	110 (72)
K.4. Applying sunscreen is the best way to protect yourself from the sun and prevent skin cancer from developing.	False	152	53 (35)
K.5. Once your skin has started to tan, it is no longer necessary to use sunscreen.	False	150	141 (94)
K.6. Babies younger than 1 year should not be directly exposed to the sun.	True	151	139 (92)
K.7. It is necessary to take additional protection measures when the UV index is >3.	True	149	136 (91)
K.8. Dark-colored clothes protect you from the sun better than light-colored clothes.	True	151	32 (21)
K.9. It is good to spend at least 1 hour in the sun each day in order to guarantee that you have sufficient levels of vitamin D.	False	152	73 (48)
K.10. Children should always use sunscreen with a factor of ≥30.	True	152	145 (95)

UV, Ultraviolet.

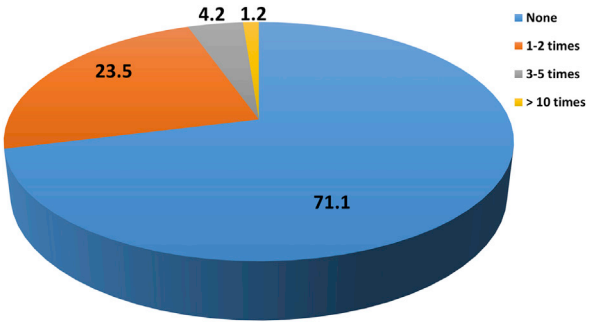

Fig 1. Percentage of study participants with sunburns in the past year.

skin cancers, given their increased sun exposure and immunosuppressed status.

We carried out a descriptive observational and cross-sectional study to ascertain the habits, attitudes, and knowledge of sun exposure of athletes who received solid organ or bone marrow transplants, as well as the frequency of sunburn in this population within the past year. After approval by the competition's official medical committee, a health survey that was based on a validated questionnaire (available in languages Spanish and English) was distributed to all participants in the 2017 World Transplant Games held in Málaga, Spain. Competitors were from all 5 continents, and all of them were able to read and write in the English language. Participants were also asked to recall the number of sunburns experienced within the past year.[4]

The survey was answered by 166 competition participants who had received solid organ or bone marrow transplants. The most frequently transplanted organ was kidney (47.8%), followed by liver and heart. The average athlete age was 48 (range 6-78) years, with a clear male predominance (71.8%). Almost 50% of the participants had a university education, and >90% of them had at least a secondary education. In total, 15% of the total sample had already experienced development of some type of skin cancer, with the dominant type being nonmelanoma, and phototypes II (42.8%) and III (38%) were the most represented (Table I).

Results of the study revealed that the most frequently represented sports were track and field, swimming, and cycling, and 60% of the respondents had been training in their sport for >15 years. Half of the participants practiced outdoor sports for >30 days a year with a minimum average of 1-2 hr/day; 31% did not use sunscreen regularly, while the remainder were consistently better at using their sunscreen (always or almost always). Many athletes (45%) reported a preference for looking tanned, and 31% did not express concern about developing photodamage, such as wrinkles or sun spots. When knowledge regarding sun exposure danger was tested, most participants (79%) had the misconception that light-colored clothing was more protective against sun damage than dark-colored clothing, and almost 28% thought that there was no risk for sun damage in the shade. However, the vast majority of athletes who received transplants recognized that ultraviolet radiation can lead to the development of skin cancer. The mean age of study participants with a history of skin cancer was 59 years of age. The results show that athletes who were transplant recipients with a history of skin cancer spent fewer hours sunbathing and more often wore long-sleeved T-shirts and long pants when exposed to the sun than those who had not had skin cancer

($P < .05$). These findings are summarized in Table II. The participating athletes obtained an overall score of high knowledge (mean score 7.27 on a 0-10 scale).

In total, 48 respondents (29%) reported having at least 1 sunburn in the past year (Fig 1), which is a lower percentage overall than the reported frequency of sunburn found in other sports, such as roller skating (56.8%) and surfing (88%).[5] Contingency tables and χ^2 test analyses have been performed to determine the effect of different variables (age, sex, type of sport, education level, and transplant type) on the number of sunburns in the past year. Higher numbers of sunburns have been found in athletes <50 years of age, and an enhanced risk for sunburn was found among athletes with only a primary education ($P < .05$). Thus, younger age and lower educational level were associated with higher solar exposure risk, coinciding with studies of healthy people. Younger age, lower education level, and male sex (nonsignificant in our study) are associated with sunbathing.[3,5]

Our analysis reveals that although athletes with transplants recognize and perceive the importance of photoprotection in the prevention of skin cancer, many are still incorrectly using sun protection, which results in sunburn. Therefore, new education campaigns are needed to correct, teach, and encourage this target population to adopt optimal sun protection habits, especially in the sports field.

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Liposuction-like sclerotherapy technique: A deep approach to superficial lymphatic malformations

To the Editor: Lymphatic malformations (LMs) result from abnormal development of lymphatics, often with an underlying somatic *PIK3CA* mutation.[1] The term superficial LM refers to a LM variant or component characterized by many dilated lymphatic channels in the dermis (Fig 1).[2,3] Treatment of superficial LMs with standard sclerotherapy is difficult because of the numerous small lumens. Lesions frequently have subclinical lateral and deep extensions, and surgical resection of a large superficial LM has a high risk for recurrence and problematic scarring.[4] Herein, we describe the liposuction-like sclerotherapy technique, a new minimally invasive surgical strategy for superficial LMs.

During June 2016-February 2018, five consecutive patients (3 male, 2 female; mean age 9.8 [range 3-18] years) with superficial LM were treated with the liposuction-like sclerotherapy technique. Diagnosis was made on the basis of clinical findings and imaging by our multidisciplinary team. The sites of superficial LMs included the suprapubic area, left abdominal wall, left thoracic wall, left upper arm and chest wall, and right forearm. Three patients had recurrent lesions after resection, and 2 had unresectable lesions. The procedures were performed under general anesthesia in the interventional radiologic suite. We used the vacuum-assisted liposuction technique to remove part of the subcutaneous fat and lymph fluid and