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Melanoma Risk Factors: Insights from the EUSCAP Project

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The EUSCAP (EUropean Skin CAncer risk factor Platform) project was initiated to comprehensively analyse skin cancer risk factors in Europe.

Material & Methods

A questionnaire and clinical examination were conducted on a cohort of 578 dermatologic patients to assess demographic, behavioral, genetic, and clinical risk factors.

Results

Among the 578 patients assessed, 79 were exclusively diagnosed with melanoma and were included into this analysis. Mean age was 57.6 years in cases and 56 in controls.

Risk factors associated with melanoma

(univariate analysis)

	Controls (%)	Melanoma (%)	p
BMI			
<30	266 (89.6)	67 (85.9)	
>30	31 (10.4)	11 (14.1)	0.030
Hair colour at age 18			
Red/blonde	98 (33.0)	42 (53.2)	
Brown/black	199 (67.0)	37 (46.8)	0.006
Ever solarium use	110 (37.2)	39 (50.0)	0.039
Sunburn during childhood	104 (37.0)	35 (50.7)	0.037
Sunburn during adolescence	134 (46.0)	48 (62.3)	0.011
Family history of melanoma	27 (9.3)	20 (25.3)	0.001
Personal history of melanoma	4 (1.3)	76 (96.2)	0.001
Nevus count			
<25	168 (57.1)	24 (30.4)	
25-50	54 (18.4)	24 (30.4)	
50-100	42 (14.3)	14 (17.7)	
>100	30 (10.2)	17 (21.5)	0.000
>20 nevi on the forearms	77 (26.1)	30 (38.0)	0.038
Atypical nevi	97 (32.9)	40 (51.9)	0.002
Solar lentigo	168 (56.8)	58 (74.4)	0.005

Independent risk factors for melanoma

(multivariate analysis)

	OR (95% CI)	p
Family history of melanoma	2.12 (1.30 – 3.47)	0.003
Naevus count		
25-50	2.63 (1.34 – 5.15)	0.005
(50-100	1.95 (0.90 – 4.2)	0.09
>100	3.49 (1.63 – 7.51)	0.001
Solar lentigo	2.08 (1.16 – 3.75)	0.01

Conclusion

In summary, our analysis identified independent risk factors for melanoma, such as family history, multiple nevi and the presence of solar lentigo. Using the EUSCAP database improves our understanding of skin cancer risk factors, with results consistent with current literature[1,2]. These results are of crucial importance for targeted prevention measures and interventions against skin cancer in Europe.

References: 1) Gandini, S. et al.: Meta-analysis of risk factors for cutaneous melanoma: III. Family history, actinic damage and phenotypic factors. Eur. J. Cancer 2005, 41, 2040–2059, doi:10.1016/j.ejca.2005.03.034.
2) Gandini, S. et al.: Meta-analysis of risk factors for cutaneous melanoma: I. Common and atypical naevi. Eur. J. Cancer 2005, 41, 28–44, doi:10.1016/j.ejca.2004.10.015.