

Euromelanoma: a dermatology-led European campaign against nonmelanoma skin cancer and cutaneous melanoma. Past, present and future

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Summary

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The worldwide incidence of cutaneous malignant melanoma has been rising steadily over the past 30 years.^{1,2} Despite intense efforts of prevention, and although the methods of early diagnosis and treatment have improved and increased

the patient's chances of survival, advanced melanoma is still a fatal disease with stable mortality rates.^{3,4}

There are good reasons to hope that the recent progress in the understanding of the molecular and genetic mechanisms

of cutaneous oncogenesis will soon translate into improved therapeutics for advanced cases. Nevertheless, primary and secondary prevention remain the cornerstone for the reduction of melanoma burden.

Euromelanoma Screening Campaign: definition and aims

Euromelanoma is a pan-European prevention campaign against skin cancer that aims to provide information to the public on prevention, early diagnosis and treatment of skin cancer. The campaign is mainly dedicated to the promotion of primary and secondary prevention of skin cancer and, in particular, of melanoma in Europe. The ultimate goal is to contribute to the on-going efforts in reducing the burden of melanoma. Organized by European dermatologists since 1999,⁵ Euromelanoma is held annually and includes free-of-charge skin examinations for the public. The campaign is promoted through public announcements and mass media advertising, coupled by educational events that focus on the risk factors of the disease, the warning signs of skin cancer, the hazards of excessive sun exposure and the optimal methods of photoprotection.

The campaign uses various means of public communication to promote skin cancer awareness and information, ranging from brochures, pamphlets and posters to mass media advertising and benefits from an internet-based platform (<http://www.euromelanoma.org>) with explicit information in different languages. Since 2000, a European logo has been used on all the material intended for this campaign (Fig. 1).

The main reason for organizing the free screening events during the campaign is to detect melanoma cases at an early and potentially curable stage. It also provides the opportunity to identify high-risk individuals (e.g. fair skin, multiple banal or atypical naevi, personal or family history of melanoma) who would benefit from close follow-up and surveillance programmes. In addition, public awareness on the threat of skin cancer and its causal relation to sun exposure is increased.

History of Euromelanoma

Initiated in Belgium in 1999 by dermatologists (Thomas Maselis, Mark van Daele, Christian Pirard, Veronique del Marmol, Bertrand Richert, Koen de Boule and their Belgian colleagues)



Fig 1. The Euromelanoma logo.

and conducted as the first 'Euromelanoma Screening Day', the concept of Euromelanoma as a major prevention campaign has spread rapidly throughout the continent. The number of participating countries grew from 14 in 2000 to 31 by 2011. Several countries such as Iceland, Finland and France participated for a limited number of years.

The 31 countries participating in the Euromelanoma campaign in 2011 and their national coordinators are summarized in Table 1. In the Netherlands and U.K., no national screening days are organized, but these countries collaborate with Euromelanoma on a scientific level. In 2012, Turkey and Georgia will join the campaign.

Organizational structure

At a European level the Euromelanoma campaign is presided by a chairman/chairwoman who is elected every 5 years by the body of representatives of the participating countries. The first chairman, between 2000 and 2005, was Dr Thomas Maselis (Belgium). Professor Andreas Katsambas (Athens, Greece) succeeded him from 2005 to 2009 and Professor Veronique del Marmol (Brussels, Belgium) is the current chairperson (2009–2014).

Table 1 The 31 countries participating in the Euromelanoma campaign in 2011 and their national coordinators

Country	First year of campaign	National coordinator
Austria	2010	Hubert Pehamberger
Belgium	1999	Thomas Maselis
Bosnia and Herzegovina	2011	Faruk Alendar
Bulgaria	2006	Nikolai Tsankov
Croatia	2008	Mirna Siturm
Cyprus	2000	Andreas Pallouras
Czech Republic	2001	Jana Hercogova
Denmark	2011	Gregor Jemec
Estonia	2011	Pille Konno
FYROM-Macedonia	2010	Zorica Zafirovic
Germany	2006	Michael Reusch
Greece	2000	Andreas Katsambas
Hungary	2009	Judith Olah
Ireland	2009	Gillian Murphy
Italy	2010	Ketty Peris
Latvia	2008	Raimonds Karls
Lithuania	2008	Matilda Bylaite
Luxembourg	2004	Hening Dittmar
Malta	2000	Lawrence Scerri
Moldova	2010	Boris Nedelciuc
Poland	2006	Waldemar Placek
Portugal	2000	Oswaldo Correia
Romania	2006	George Sorin Tiplica
Russia	2007	Nikolai Potekaev
Serbia	2008	Ljiljana Medenica
Slovenia	2008	Igor Bartenjev
Slovak Republic	2004	Vladimir Hegyi
Spain	2000	Julian Conejo Mir
Sweden	2000	John Paoli
Switzerland	2006	Antonio Cozzio
Ukraine	2009	Olga Bolgomets

The Euromelanoma Screening Group includes the national representatives of the participating countries who all take part in an annual meeting on the pre-Congress Day of the Annual Congress of the European Academy of Dermatology and Venereology (EADV). Operational guidelines have been constructed based on the collective experience from running the campaign in different countries over the past years. Logistic aspects and practices can vary among countries and are subject to change in the future based on the evolution and the organizational needs of the campaign.

The functioning of Euromelanoma is based on the following general principles:

1 The Euromelanoma Screening Campaign is scheduled on a predefined Monday in the spring, preferentially in the month of May, which precedes the summer season, summer vacations and recreational activities under the sun. May is also considered an appropriate time for the campaign as it is already designated a skin cancer awareness month in some countries. The date of the campaign is decided upon during the annual Euromelanoma Group Meeting with the aim of synchronizing the event in all countries, even though exceptions may occur in certain countries due to conflicts with official holidays or religious events.

2 In each country, a local task force, designated as the Local Euromelanoma Committee, organizes the Euromelanoma day. The task force is led by a national representative, who is required to be an EADV member affiliated to a hospital or academic institution. The national representative is confirmed by the national society of dermatology and participates at the annual Euromelanoma Group meeting. The local Euromelanoma Committee is responsible for running the campaign in conjunction with the local authorities (e.g. Ministries of Health), the national medical and/or cancer societies, the local media etc. It follows a specific operational agenda which includes sending invitations for participation to local dermatologists, setting up a public telephone line for booking screening appointments and organizing a press conference to inform media about the event.

3 The Euromelanoma Screening Campaign usually takes place under the auspices of the national and/or regional dermatological societies with or without financial sponsors designated by each local task force.

4 The campaign is conducted by dermatologists, operating in private offices/centres or in public hospitals. The screening is generally free-of-charge for participants and the dermatologist(s) do not receive a consultation fee. However, the regular fee for a visit to a dermatologist is charged in some national health systems.

5 Each year a specific theme is chosen for the European campaign which is recommended to be used in each country.

6 The existing information material, particularly the specifically designed Euromelanoma logo (Fig. 1), is an integral part of all Euromelanoma-related material (brochures, pamphlets, posters etc.).

7 The screening consists of a skin examination and the completion of a questionnaire-based interview (Appendix 1). A

common European questionnaire was developed by participating countries in 2008 under the coordination of two epidemiologists (Dr Jean Luc Bulliard and Dr Esther de Vries). Since then, no other questionnaire has been utilized for gathering data during the Euromelanoma campaign. However, additional data can be obtained by the participating countries under the responsibility of the local organizers. Since 2009, data collection has been centralized through a web-based application (initially established by Esther de Vries) accessible from the Euromelanoma website (<http://www.euromelanoma.org>).

8 The creation of a Euromelanoma website has provided a wealth of information about the campaign with direct public access. Each participating country can translate and store educational material on its own subsections of the website, all of which have a common template.

9 Parallel events that aim to highlight the purposes of the Euromelanoma Screening Campaign and to increase public awareness of the main issues of melanoma/skin cancer prevention are also organized. Such events include visits to schools for educational purposes, setting up Euromelanoma screening booths at central locations of cities, or screening specific high-profile or widely recognized individuals or populations, e.g. sporting teams or professional athletes.

Results of the campaign

In an effort to draw more general conclusions regarding the screening campaign across Europe, an analysis of the Euromelanoma campaign in all participating countries was undertaken. Results of this concentrated effort were recently published.⁶ At the local level, however, some particularities have been observed, which are likely to reflect inherent and behavioural differences among European populations.

Belgium initiated the Euromelanoma campaign in 1999 with the initial name of 'Melanoma Monday' taken from an American skin cancer screening campaign. During this first campaign, participation of the local dermatologists was remarkable, as 521 (65%) of the country's dermatologists screened 2767 screenees.⁵ In total, 35 lesions suspicious of melanoma were identified (of which 25 were eventually confirmed histologically, yielding a predictive value of 71%). Furthermore, 59 clinically suspected basal cell carcinomas were found. This success could not be reproduced in the following years, and was most probably the success of a first campaign with high media coverage and enjoying the impact of a first-time event.

Remarkably, for the 2007 campaign, a former Belgian prime minister offered his body image to encourage older men, a specific high-risk group for melanoma mortality, to be screened. This image had a high impact in the Belgian press and led to a significant increase in screening attendance of older Belgian men.⁷

In Switzerland,⁸ where the incidence of melanoma is among the highest in Europe, annual 1-day screening campaigns run by dermatologists have existed since 2000.⁸ Historically, the current Euromelanoma questionnaire largely

benefited from the pre-existing Swiss and Belgian questionnaires. Participation among both dermatologists and the general public during the Swiss Euromelanoma campaigns has been steady and comparatively high: 150 dermatologists (approximately one-third of all registered dermatologists) and 4000–7000 Swiss inhabitants are screened yearly. The risk profile of the screened population corroborated observations from other European countries: a predominance of females (58%) and of younger subjects (median age 43 years), with the notable exception of a small fraction of highly sun-sensitive people (skin type I or II: 22%).⁹ In 2006, an estimated 328 people needed to be screened to detect a melanoma (119 for all skin cancers).

In Spain,¹⁰ during the campaigns performed in the years 2000–2002, dermatologist participation ranged between 20% and 32% of the current members of the Spanish Academy of Dermatologists and Venereologists, with an average of 399 dermatologists per campaign. People who wanted to access the campaign had to ask for an appointment through a telephone number. Out of 33 750 calls, 12 487 individuals were screened and 164 suspicious lesions were detected. Pathological evaluation was obtained 4 months later in 143 of the suspicious lesions and 31 cases (23.3%) were proven to be melanomas with a mean Breslow thickness of 0.93 mm.

In Greece,¹¹ 9723 individuals were screened in the years 2000–2004, most of whom were below the age of 50 years (71%), female (59%), and of skin phototype II–III (76%). Sunburn during childhood was reported by 47% of participants, while 5% of the screened population had a personal or family history of melanoma. On clinical examination, 14.4% had actinic keratoses, 31.2% had dysplastic naevi, while 6.4% carried a presumptive diagnosis of nonmelanoma skin cancer. In the 2003–2004 screening campaign, 19 of the 171 clinically suspicious lesions were histologically proven to be melanoma, most of which (58%) were 'thin' melanomas (Breslow thickness \leq 1 mm) of the superficial spreading type.

In Sweden,^{12,13} the 2008 and 2009 campaigns resulted in the screening of a total of 5620 patients. During these two campaigns, 50 melanomas were histopathologically confirmed. Twenty of these were *in situ* and the great majority of the invasive melanomas showed excellent prognostic characteristics. The high detection rates of melanoma among the patients screened in Sweden could possibly be due to the median age of the patients, which was 57 and 56 years in the respective campaigns. The key to attracting older patients (with a higher risk of having melanoma) to screening was the incorporation of an age limit prohibiting patients under the age of 18 years from participating in screening.

At the European level, the screening data from 20 participating countries were entered in the central database.⁶ In 2009 and 2010, the pooled number of screenees was 59 858 subjects. In concordance with the aforementioned results from national campaigns, most screenees were female (64%), had median ages of 43 (females) and 46 years (males) and were of phototype I–II (33%). The rates of clinically suspicious le-

sions ranged from 1.1% to 19.4% for melanoma (mean 2.8%), 0.0% to 10.7% for basal cell carcinoma (mean 3.1%) and 0.0% to 1.8% for squamous cell carcinoma (mean 0.4%). The positive predictive value for melanoma was estimated to be 13.0% (for countries that could provide histological confirmation of cases), whereas melanoma detection rates varied from 0.1% to 1.9%.

Dermoscopy was used in 78% of examinations for clinically suspected melanoma and 72% of screenees received full-body skin examinations. Overall, high rates of clinically suspected melanoma were found during the campaign, although the population screened was relatively young.⁶

Impact of Euromelanoma on the prevention of skin cancer in Europe

After a decade of yearly campaigns (2000–2010) in an increasing number of countries, an attempt was made to evaluate the actual impact of Euromelanoma on the prevention and education efforts against skin cancer in Europe. National coordinators of Euromelanoma were invited to take part in a survey in order to provide an estimate of the impact of the campaign on public attitudes and medical approaches to the disease and on national efforts of skin cancer prevention.¹⁴ This study gathered responses from 21 of 27 country representatives who reported a total number of approximately 260 000 screenees since the beginning of the campaign.¹⁴ Commonly reported challenges included difficulties in reaching high-risk populations through screening and in maintaining the dermatologists' continuous interest over the years in participating in the campaign. However, the respondents agreed on the success of the Euromelanoma campaign in raising the awareness of the population on skin cancer risk and prevention in strengthening the role of dermatologists in skin cancer management and in stimulating the mass media involvement in educational and preventive efforts.

Conclusions

Euromelanoma is an example of a pan-European initiative that successfully combines modern methods of public communication with the dedication of dermatologists beyond national borders in order to address the important but often overlooked public necessity of skin cancer prevention. Its constant expansion across the continent and the high popularity it enjoys in participating countries emphasizes both the motivation of the medical profession and the public's need for information and guidance on skin health. In order to achieve its goals, Euromelanoma will benefit from the improved coordination and harmonization of its operational procedures among participants, as well as from the continuous expansion and improvement of its preventive and educational activities and the nuanced adaptation of various logistic aspects in order to respond to the specific needs of each country and region. The encouraging results obtained so far reflect the efforts of thousands of dedicated dermatologists across Europe. Together,

they have created one of the most successful campaigns against cancer and a solid foundation for the future in the battle against skin cancer.

What's already known about this topic?

- Euromelanoma is a dermatologist-led European prevention campaign with the goal of early detection of melanoma through screening and public education.

What does this study add?

- The study provides information on the organizational structure of the campaign and summarizes the screening data from some participating countries after a decade of annual campaigns.

References

- 1 Garbe C, Leiter U. Melanoma epidemiology and trends. *Clin Dermatol* 2009; **27**:3–9.
- 2 de Vries E, Coebergh JW. Cutaneous malignant melanoma in Europe. *Eur J Cancer* 2004; **40**:2355–66.
- 3 Karim-Kos HE, de Vries E, Soerjomataram I *et al.* Recent trends of cancer in Europe: a combined approach of incidence, survival and mortality for 17 cancer sites since the 1990s. *Eur J Cancer* 2008; **44**:1345–89.
- 4 Bosetti C, La Vecchia C, Naldi L *et al.* Mortality from cutaneous malignant melanoma in Europe. Has the epidemic levelled off? *Melanoma Res* 2004; **14**:301–9.
- 5 Vandaele MM, Richert B, van der Endt JD *et al.* Melanoma screening: results of the first one-day campaign in Belgium ('Melanoma Monday'). *J Eur Acad Dermatol Venereol* 2000; **14**:470–2.
- 6 van der Leest RJ, de Vries E, Bulliard JL *et al.* The Euromelanoma skin cancer prevention campaign in Europe: characteristics and results of 2009 and 2010. *J Eur Acad Dermatol Venereol* 2011; **25**:1455–65.
- 7 del Marmol V, de Vries E, Roseeuw D *et al.* A Prime Minister managed to attract elderly men in a Belgian Euromelanoma campaign. *Eur J Cancer* 2009; **45**:1532–4.
- 8 Heinzerling LM, Dummer R, Panizzon RG *et al.* Prevention campaign against skin cancer. *Dermatology* 2002; **205**:229–33.
- 9 Bulliard JL, Maspoli M, Panizzon R *et al.* Evaluation of the Euromelanoma skin cancer screening campaign: the Swiss experience. *J Eur Acad Dermatol Venereol* 2008; **22**:365–6.
- 10 Conejo-Mir J, Bravo J, Diaz-Perez JL *et al.* [Euromelanoma Day. Results of the 2000, 2001 and 2002 campaigns in Spain]. *Actas Dermosifiliogr* 2005; **96**:217–21.
- 11 Stratigos A, Nikolaou V, Kedicolou S *et al.* Melanoma/skin cancer screening in a Mediterranean country: results of the Euromelanoma screening day campaign in Greece. *J Eur Acad Dermatol Venereol* 2007; **21**:56–62.
- 12 Paoli J, Danielsson M, Wennberg AM. Results of the 'Euromelanoma Day' screening campaign in Sweden 2008. *J Eur Acad Dermatol Venereol* 2009; **23**:1304–10.
- 13 Paoli J, Lindorsson S, Tarstedt M *et al.* Skin cancer detection among 2961 patients during the 'Euromelanoma Day' Screening Campaign in Sweden 2009. *J Clin Dermatol* 2010; **1**:11–17.

14 del Marmol V, Forsea AM. Euromelanoma: Present Challenges and Future Perspectives at the 10th Anniversary. Presented at 1st International Conference on UV Effects and Skin Cancer Prevention, 2–5 May 2011, Copenhagen, Denmark.

Appendix 1. Euromelanoma questionnaire 2011

To be completed by person screened:

1. Gender: Male Female

2. Date of birth: (day/month/year) //

3. What is your highest degree of education?

- Primary school High school Vocational education
 University degree

4. Why did you participate in Euromelanoma? (Tick all that apply)

- I have many moles
 Recently changed or suspicious lesion
 I was previously diagnosed with a skin cancer
 I have a family member or friend with skin cancer
 Because I want to have my skin checked

5. Have you previously received a full skin examination? (including Euromelanoma)

No Yes __ Number of times

6. Did or do you have an outdoor occupation? If yes, for how many years?

- No
 Yes, for: 1 year or less
 1–5 years
 5–10 years
 more than 10 years

7. How does your skin react to the summer sun?

- My skin always burns, never tans
 My skin always burns, tans minimally or with difficulty
 My skin initially burns and then tans
 My skin burns minimally, tans readily

8. Did you suffer from severe sunburn (a painful sunburn, with intense redness or blistering, lasting for 2 days or more) before the age of 18 years?

No Yes I don't remember

9. How often do you use sunscreens when you are exposed to the sun?

- 9.1. When you are outdoors for > 1 hour (other than sunbathing): Never Sometimes Always
9.2. Do you apply sunscreen when you are sunbathing:
 Never Sometimes Always
9.3. I never sunbathe:

10. Did you spend in total one year or more in a country with much higher sun exposure than the country where you currently live?

- No
 Yes, before the age of 18 years: years
 Yes, after the age of 18 years: years

11. Sun exposure during adulthood?

- 11.1. Number of weeks per year at sunny holidays: 0 2 weeks or less more than 2 weeks
11.2. Do you use solarium? No Yes \leq 20 sessions or fewer/year Yes, 21 or more sessions/year
11.3. Number of years using solarium (including in the past only): years

To be completed by physician:

12. Family history of melanoma (melanoma in first-degree relatives: father, mother, brother and sister): No Yes: 1 relative Yes: \geq 2 first-degree relatives Patient doesn't know

13. Personal history of skin cancer:

- No
 Yes, melanoma
 Yes, nonmelanoma skin cancer
 Patient doesn't know if he/she has had skin cancer

14. Skin examination performed today: full partial

15. I used dermoscopy to examine this patient: Yes No

16. Clinical examination:

- 16.1. Number of moles: $<$ 25 25–50 50–100 $>$ 100
16.2. Presence of lentiginos on the back/chest: No Yes
16.3. Presence of atypical moles (according to definition*): No Yes Number: ____
*(asymmetry, ill-defined border, irregular pigmentation/colour, diameter $>$ 6 mm)
16.4. Presence of actinic keratoses: No Yes

17. Clinically suspicious lesions:

1. Melanoma: No Yes __ Number
2. BCC: No Yes __ Number
3. SCC: No Yes __ Number
4. Other or clinically undefined: No Yes __ Number

18. The lesion was first detected by (please fill only when there is a clinically suspicious lesion observed by the dermatologist; if there are several lesions, the clinically most important one):

- patient dermatologist another health professional spouse/partner other person