Four Years of Euromelanoma Skin Cancer Awareness Campaign in Norway 2014–2017

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Euromelanoma is a dermatologist-led skin cancer awareness and screening campaign organized annually in several European countries since 2000 (1). Norway, with a high incidence and mortality of cutaneous melanoma (2, 3), joined the Euromelanoma campaign in 2014. Here, we report our experience from 4 years of Euromelanoma in Norway.

Methods

Norway has approximately 5.2 million inhabitants and about 160 dermatologists. A loosely organized public health education campaign was initiated in May each year, based on advice, leaflets and posters from the Euromelanoma network (1) in close cooperation with the Norwegian Cancer Society. Websites were created, updated and/or translated, social media messages were sent out, and a short video film on melanoma were shown on general practitioners' waiting rooms. National and local newspapers, radio stations and television stations were approached for interviews and feature articles.

Persons with perceived high risk of skin cancer and/or with what they thought was a suspicious skin lesion, were invited to attend a skin examination screening on the day of the campaign. Appointment with a dermatology department or practising dermatologist involved in the campaign were done through a centralized telephone or online service. Questionnaires were used to collect relevant demographic, epidemiological and clinical data of those screened. All clinically suspicious lesions were excised on the same day (or the next day) and examined by a pathologist.

Results

The 4 campaigns resulted in more than 900 newspaper articles and radio or television appearances and more than 130,000 visits to the Norwegian Euromelanoma and cancer society websites promoting healthy sun habits and explaining early signs of melanoma.

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Skin examinations were performed by 50–70 dermatologists each year at both public hospitals and private clinics. In total, 5,281 persons a with mean age of 46–52 years, >60% females, were examined (Table I). Eleven persons (0.21%) were diagnosed with a histologically confirmed *in situ* melanoma and 22 (0.42%) with an invasive melanoma, most with a Breslow thickness <1.0 mm. In addition, 114 keratinocyte skin cancers, mostly basal cell carcinomas, were diagnosed.

Table I. *Persons screened for skin cancer at annual Euromelanoma campaigns in Norway 2014–2017*

	2014	2015	2016	2017
Persons, *n*	1,450	1,322	1,290	1,219
Mean age, years	48	52	46	47
Women, %	NR	NR	63	65
In situ melanoma, *n* (%)	3 (0.21)	2 (0.15)	3 (0.23)	3 (0.25)
Invasive melanoma, *n* (%)	5 (0.34)	9 (0.68)	4 (0.31)	4 (0.33)
Breslow thickness, mm	≤0.75	0.6->2.0	0.2-1.2	0.4-1.0
Basal cell carcinoma, *n*[a]	17	52	25	11
Squamous cell carcinoma, *n*	4	5	0	0

[a]Including multiple basal cell carcinomas in some individuals. NR: not registered.

Discussion

The impact of disease awareness campaigns is hard to assess. Except for internal assessment of logistics to improve next year's campaign, no formal evaluation of the 4 Euromelanoma campaigns in Norway has been performed. However, considering the high media attention, we believe that the campaigns have had a positive influence on the general public's attitudes towards more healthy sun habits, preventive measures against skin cancer and awareness of early signs of skin cancer, particularly melanoma.

The number of diagnosed melanomas was low, and most melanomas were *in situ* lesions or thin melanomas with a very good prognosis. This is in accordance with results from a Euromelanoma campaign in Sweden (4). In both countries, all clinically suspicious lesions were excised as part of the Euromelanoma screening consultation. This is in contrast to Euromelanoma campaigns in most other countries, reporting only rates for

clinically suspicious lesions, which for melanoma ranged from 1.1% to 19.4% (5). In Norway, as in Sweden (4), the number of diagnosed keratinocyte skin cancers was higher than for melanoma, but these cancer forms, particularly basal cell carcinomas, have generally a good prognosis.

Our data, as well as anecdotal feedback from dermatologists, indicate that a substantial proportion of those screened were not at increased risk of melanoma nor had a truly suspicious skin lesion, mirroring reported challenges of similar campaigns in other countries (1, 4).

Mass screening for detecting cutaneous melanoma is not recommended, as the evidence of any significant effect on mortality is lacking (6). Randomized control trials of the effect of screening for melanoma are difficult to set up (7). Targeted screening of persons with a high risk of melanoma requires methods to identify and recruit such individuals (6). Intensified screening efforts may result in overdiagnosis, i.e. diagnosing lesions that would not have any impact on the person's life or life expectancy if it had not been diagnosed and removed (6, 8). We therefore regard the Euromelanoma campaign as an awareness campaign supported by skin examination events, and not as a screening campaign.

We believe that campaigns to prevent melanoma and other forms of skin cancer should focus more on the need for more healthy sun habits, particularly avoiding sunburn and use of sun beds, than on screening. Also, information on self-examination of pigmented skin lesions and early signs of melanoma, i.e. the appearance of one pigmented skin lesion that is different from all others ("the ugly duckling-sign"), and any change in colour, size and/or shape of an existing mole, should be highlighted. An annual campaign, with or without organised skin examinations, to attract attention from mass media and the general public is an excellent opportunity for dermatologists to promote this message.

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