

Melanoma in Europe: North meets South, East meets West^{*}

Melanom in Europa: Der Norden trifft den Süden, der Osten den Westen

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Bibliography

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Abstract



Melanoma incidence and the number of deaths have increased steadily in most European countries and the trend is expected to continue. However, the melanoma burden is unequally distributed across the Continent, with important variations of melanoma incidence, mortality and survival between European regions. According to recent estimates the incidence rates are nine-fold higher in Western than in Central and Eastern Europe (CEE). In contrast, mortality rates are fairly similar, whereas several countries in CEE report the lowest melanoma survival. As effective treatment in advanced stages of melanoma remains elusive, the high disparities in tumor burden and prognosis between European countries are likely related to the large differences of early detection and management of primary tumors. More accurate data on the epidemiological situation and the patterns of access to health care of melanoma patients in CEE countries are needed. Improving patients' education for early detection and sun safety, enhancing physicians' training and motivation together with implementation of functional systems of melanoma reporting and registration are priorities across the Continent.

Annually, over 22 000 deaths are estimated to be caused by melanoma in Europe [1]. Melanoma incidence has increased steadily over the last decades and the trend is expected to continue in most European countries [2]. However, the melanoma burden is unequally distributed across the Continent, with important variations of melanoma incidence, mortality and survival between European regions [3, 4].

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Recent epidemiological estimates [1, 3] confirm the North-South and West-East gradient in melanoma incidence, with a 10-fold difference between the highest incidence rate estimated in Switzerland (19/100,000) and the lowest in Albania (1.9/100,000) (● Fig. 1). The Central and Eastern European (CEE) region estimate the lowest incidence rate on the Continent, but similar mortality with the Western European region. This suggests lower survival, confirmed by the studies on survival performed in the very few CEE countries with appropriate cancer registration [4].

At the same time, quality epidemiologic data for the CEE region are limited, as this region has the highest number of countries without functional centralized cancer registries [1, 5] (● Fig. 2). Population-based information on stage distribution and thickness at diagnosis is also scarce, with the few available reports suggesting however that thick tumors are significantly more frequently diagnosed in CEE countries than in the rest of the continent [3, 6, 7].

As treatment in advanced stages of melanoma remains elusive, these significant disparities in tumor burden and prognosis between European countries are likely related to the differences in prevention efforts, public awareness, and in the systems of early detection and management of primary tumors. Significant disparities exist in the availability of prevention campaigns and level of public awareness between European countries. Many CEE countries lag two decades behind their Western neighbors in conducting nation-scale prevention campaigns and benefit from significantly less involvement of government and non-government organizations in prevention and public education [7–9] (● Fig. 3).

An expert survey of European opinion leaders in dermato-oncology conducted from the Harvard School of Public Health [7] pointed to the public and professional education for tumor early detection as the top priorities for reducing the melano-

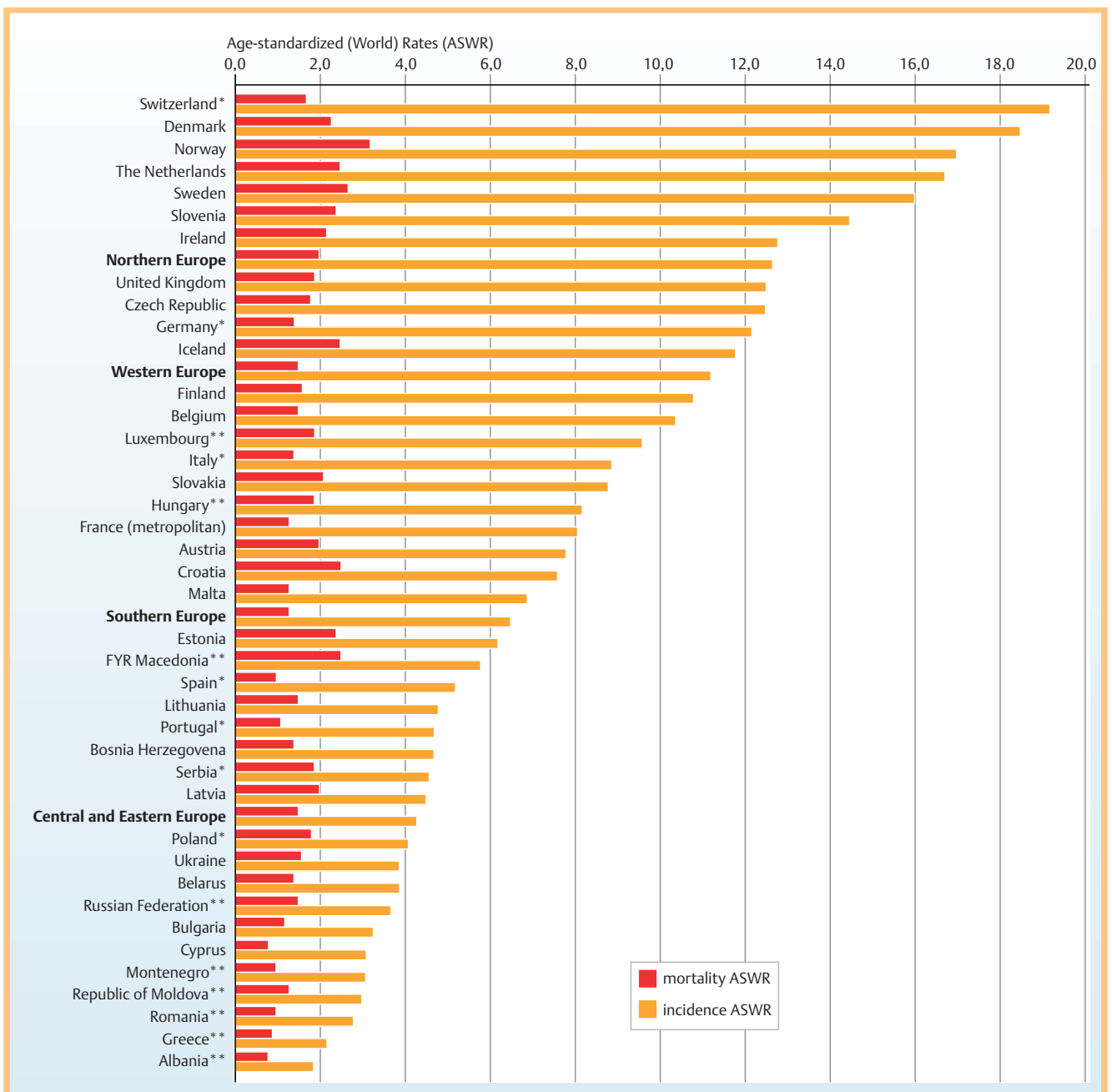


Fig. 1 Melanoma incidence and mortality estimates in Europe (data source: Globocan 2008, IARC) [3].

* countries with regional cancer registers; ** countries without own cancer registry

ma burden across Europe. The lack of national programs of public education, insufficient initiatives from the public authorities, and insufficient training of physicians on skin cancer stood out as the main obstacles in tackling the melanoma issue, in Western and Eastern European countries alike.

Central and Eastern European countries face further several specific challenges in addressing the melanoma issue. The implementation of nationwide programs of cancer screening and early detection in these countries is impaired by the: lack of specialized health care; disparities in geographical distribution of the necessary health workforce and quality diagnostic equipment; lack of know-how in the management of population-based programs and of epidemiologic surveillance, insufficient understanding by the decision makers of the necessary resources for epidemiologi-

cal surveillance [10,11]. Financial constraints also hinder health promotion, as these countries have the lowest national health expenditure/capita in Europe [12]. Legislation for skin cancer prevention, in the form of regulation limiting the sun exposure and stimulating the photoprotection is only scarcely implemented in the CEE region [13].

In conclusion, melanoma burden varies widely across Europe. Central and Eastern European countries are estimated to have the lowest survival and at the same time to lag behind in terms of epidemiological surveillance, capacity of early diagnosis and public education and prevention campaigns. Accurate data on the real epidemiological situation and the patterns of access to health care of melanoma patients in CEE countries are urgently needed. At the same time, improving patients' education for early

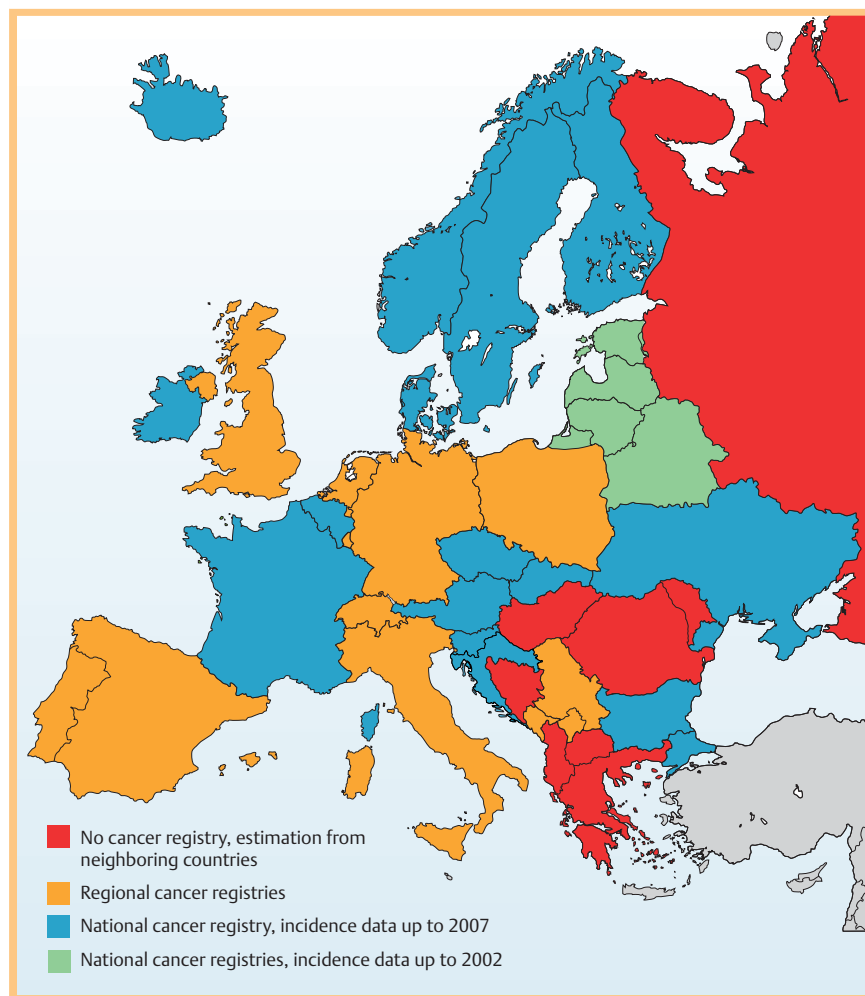


Fig. 2 Availability of population-based cancer registries in Europe (data source: IARC) [3].

detection and sun safety, enhancing physicians' training and motivation for skin cancer examination and counseling and implementation of functional systems of melanoma reporting and registration are priorities across the whole Continent.

These priorities can be turned into actions if advantage is taken of the current opportunities: the pan-European experts' agreement on the main obstacles and priorities for preventive actions, the increasing opening for collaborative research and know-how transfer between countries, and the institutional, legislative and financial support of the European Union for concerted action against cancer and for the harmonization of health systems across the Continent. On these premises, the disparities of skin cancer burden between North and South, East and West in Europe could be eradicated.

Conflict of interest



The author has no conflict of interest.

Zusammenfassung

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Die Inzidenz des malignen Melanoms (MM) und die Zahl der Todesfälle haben ständig zugenommen in den meisten Ländern Europas, und dieser Trend wird sich erwartungsgemäß fortsetzen. Die MM-Last ist gleichmäßig verteilt, mit deutlichen Abweichungen von Inzidenz, Mortalität und Überlebensdauer zwischen den einzelnen Regionen. Nach neueren Berechnungen ist die Inzidenz im Westen 9× höher als in Zentral und Osteuropa (ZOE), die Mortalität ist etwa gleich, während die Überlebensdauer in Ländern von ZOE am niedrigsten ist. Eine effektive Behandlung des fortgeschrittenen MM ist schwer zu erzielen, die Unterschiede zwischen Tumorlast und Prognose zwischen den europäischen Ländern sind offenbar auf Ungleichheiten in der Früherkennung und Versorgung des Tumors zurückzuführen. Über die epidemiologische Situation und den Zugang zur Behandlung in ZOE werden mehr Informationen benötigt. Über den gesamten Kontinent ist es notwendig, die Ärzte und ihre Motivation beim Hauttumor-Nachweis zu trainieren, und entsprechende Melde- bzw. Registrierungsverfahren einzuführen.

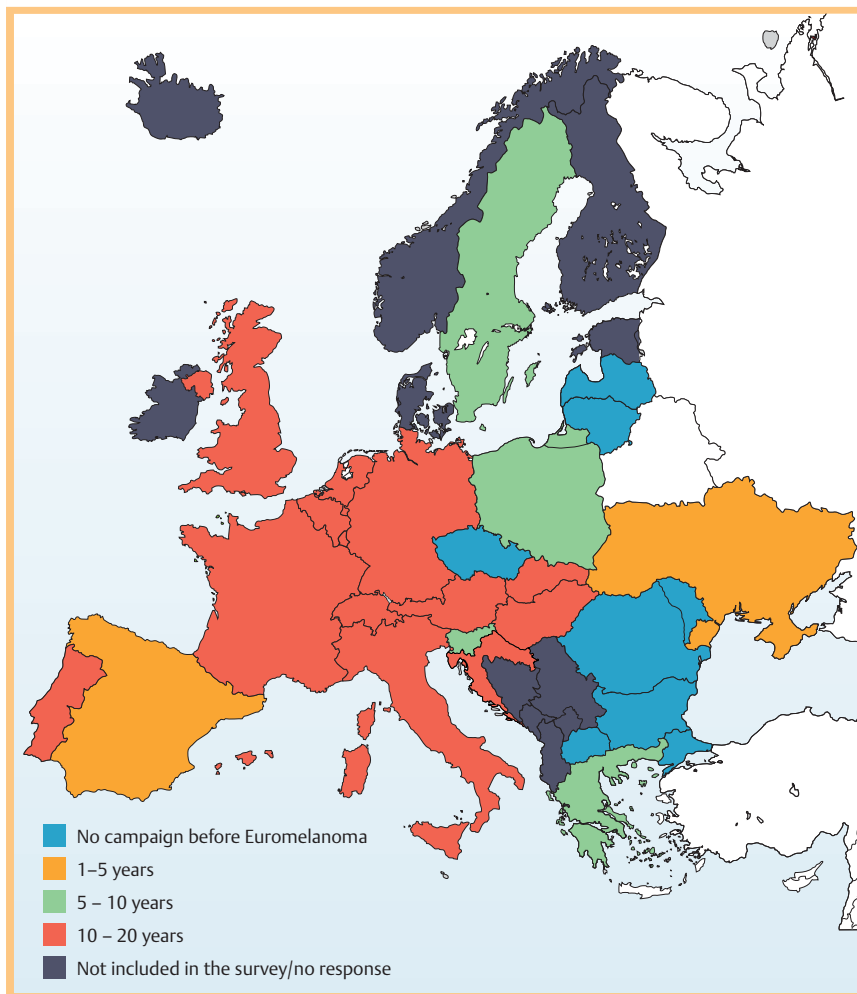


Fig. 3 Duration of skin cancer prevention and public education campaigns in Europe [9].

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