

The public health future of melanoma control

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CME INFORMATION AND DISCLOSURES

Statement of Need:

Healthcare providers continue to underreport melanoma even though cancer reporting requirements mandate such reporting. Additionally, providers may be unaware of recent trends and descriptive epidemiology regarding melanoma which includes the fact that nonwhites have a higher mortality rate from melanoma than do whites.

Target Audience:

Dermatologists, dermatopathologists, general physicians, and public health professionals.

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Learning Objectives

After completing this learning activity, participants should be able to describe recent trends in the epidemiologic patterns of melanoma, including ethnic disparities in melanoma mortality; identify when a private practice dermatologist is required to

report melanoma cases to a cancer registry; locate and access central cancer reporting registries (<http://apps.nccd.cdc.gov/cancercontacts/npcr/contacts.asp>); and recognize and access national and state-based sources on surveillance systems for sun protection behaviors.

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Key words: cancer control; cancer prevention; commentary; dermatology; melanoma; public health.

Over recent decades, melanoma has emerged as a formidable public health challenge.¹ Steadily increasing incidence rates, accompanied by disturbing trends in melanoma mortality, have sparked a heightened commitment to early detection and prevention.² In that spirit, we welcome the wealth of new information captured in this supplement.³ Found within are some major studies that not only clarify current understanding of melanoma trends but also sharpen future strategies for public health efforts. Of note, major studies in this monograph broaden our understanding of melanoma epidemiology and surveillance, risk behaviors, and intervention strategies that advance the core public health functions of assessment, assurance, and policy development.³

Specifically, the broad range of topics addressed in this monograph include: exposures that can lead to the tumor (ultraviolet [UV] exposure); pathologic aspects of the tumor (histology, staging, subsequent primary cancers); surveillance (comprehensive examination of incidence rates, mortality, and survival; surveys of sun-protection behaviors; and statewide sun-protection programs); disease in specific population subgroups (adolescents and young adults, persons from low socioeconomic status areas, and persons of different racial and ethnic groups); and goals for reducing mortality (a strategic plan that includes screening and education for individuals at high risk).

To begin, the overriding initial goal remains to maximize accurate cancer registry assessment of melanoma incidence and mortality. In this regard, the country has made substantial progress. Initially, the traditional National Cancer Institute (NCI) Surveillance, Epidemiology, and End Results

database encompassed 5 states and 4 metropolitan areas, or about 10% of the population. More recently, Surveillance, Epidemiology, and End Results has expanded to include 9 states and 6 metropolitan areas, more than doubling coverage. Moreover, the growth of the Centers for Disease Control and Prevention (CDC) National Program of Cancer Registries (begun in 1992) now permits surveillance of up to 96% of the population. These two federal systems, therefore, allow more comprehensive analyses than ever before.

Along the way, comprehensive melanoma assessment has encountered, and begun to overcome, the problem of underreporting. A number of years ago, studies began documenting melanoma underreporting of incidence, ranging from 12% to 30% in cancer registries.⁴⁻⁸ As the phenomenon appears largely attributable to increasing care of patients with melanoma outside the hospital setting, registries have since embraced efforts to require reporting from outpatient surgery centers, pathology facilities, and doctors' offices.

Two major studies in this supplement represent major investigations of the national burden of melanoma, while accounting for the biases introduced by underreporting. In thorough analyses of national data during a 15-year period, Watson et al⁹ and Jemal et al¹⁰ document incidence increasing steadily from 1992 to 2006, the disproportionate burden on non-Hispanic whites, and mortality that decreased in younger (<65 years) populations but increased in older (>65 years) ones. These insights raise appropriate public health questions about whether education and early detection efforts have effectively reached some populations but not others. Of concern, studies in the monograph underscore the growing

CAPSULE SUMMARY

- Key articles in the melanoma supplement are highlighted.
- The public health importance of melanoma control, and this supplement's contribution to that effort, are described.

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Abbreviations used:

CDC: Centers for Disease Control and Prevention
NCI: National Cancer Institute
UV: ultraviolet

understanding that lower socioeconomic status groups suffer increased rates of advanced-stage melanoma and decreased survival.^{10,11}

Public health researchers have similarly made substantial progress in tracking melanoma-related risk behaviors. By integrating UV exposure questions into national surveys (through the Health Information National Trends Survey, the Behavioral Risk Factor Surveillance System, and the National Health and Nutritional Examination Survey), investigators note disturbing trends. For example, in this monograph, Buller et al¹² use Behavioral Risk Factor Surveillance System data to document that in a given year, one third of adults and over two thirds of adolescents become sunburned.

Such results have prompted renewed efforts to implement the public health functions of policy development and assurance with respect to both primary and secondary prevention. Regarding the former, many agencies and entities are exploring multiple ways to reduce intentional UV use. Sun-protection teaching, led by the US Environmental Protection Agency SunWise Program, now reaches thousands of US schools¹³; pool-goers nationwide can receive "Pool Cool" sun-safety teaching against the backdrop of new protection policies.¹⁴ In 2009, the World Health Organization International Agency for Research on Cancer announced that it had placed UV tanning beds into its highest cancer risk category: "carcinogenic to humans."¹⁵ This finding has led to legislation related to tanning beds, which include bans for all children in Germany and certain states in Australia,^{16,17} restrictions for children in many US states,¹⁸ and a new tax provision on indoor tanning services in the 2010 Patient Protection and Affordable Care Act.¹⁹ More countries and states may seek legislative action in response to a recent case-control study in Minnesota that found that more than 60% of cases reported use of tanning beds, with risk increasing by years and hours of use.²⁰ Also, the US Food and Drug Administration has recently developed new rules for sunscreens that would establish a standard testing protocol and address UVA protection.²¹

Meanwhile, in this supplement, Townsend et al²² review the primary prevention strategy of integrating CDC-funded sun-protection initiatives within state-based comprehensive cancer control programs. They

emphasize the need to tailor strategies to the local context and recommend the use of cancer control planning tools such as the NCI P.L.A.N.E.T. (Plan, Link, Act, Network with Evidence-based Tools).²³

Related efforts also revolve around secondary prevention initiatives of early detection and screening recommendations. Because evidence from randomized trials is lacking, the US Preventive Services Task Force (2009) does not endorse population-based screening for skin cancer.²⁴ However, although not endorsing population-based screening, the Institute of Medicine (2000) advised physicians to be alert to the warning signs of melanoma in older men.²⁵ International studies from the United States, Australia, and Germany add to the growing database of screening trials that could inform future policy discussions.²⁶⁻²⁸ Meanwhile, other studies explore the potential value of self-screening and educational programs to teach physicians how to integrate a brief, skilled skin examination into routine examination, particularly in vulnerable groups.²⁹⁻³¹

In summary, enhancing the early detection and prevention of melanoma remains a national cancer goal for our society. As most melanoma deaths should be preventable, we need to continue to maximize reporting; improve the status of behavioral, educational, and screening trials; adopt effective policies that prevent sunburn through UV protection; better understand the reasons for increasing death rates in older populations; and align health systems to facilitate prevention and early detection. Meeting these targets and renewing our commitment will lead to a healthier people for our country.³²

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