

PERSPECTIVE



Catch melanoma early

The United States and other nations should follow Germany in routine skin screening, say **Susan M. Swetter** and **Alan C. Geller**.

Melanomas can be treated most effectively if they are caught early when they are thinner. The best way to make sure this happens is to have a doctor or other health-care provider perform skin examinations, rather than to rely solely on the patient.

However, in 2009, a lack of clinical-trial data on the effect of screening on melanoma mortality left the US Preventive Services Task Force (USPSTF) unable to recommend routine skin-cancer screening of the general population by primary-care doctors. The USPSTF pointed out that the harms of such screening — such as physical and psychological effects related to misdiagnosis, overtreatment and unnecessary biopsies — had not been adequately addressed.

Since then, however, evidence for improved outcomes following skin screening has mounted. A population-based study of the residents of Queensland, Australia, with first primary invasive melanoma (which invades the deeper layers of the skin) showed a 40% lower risk of being diagnosed with thick (≥ 3 mm) melanoma if a skin exam was performed in the three years before diagnosis¹, resulting in a predicted 26% fewer melanoma deaths over five years.

An employee education and screening programme at the Lawrence Livermore National Laboratory from 1984 to 1996 was associated with a nearly 70% reduction in thick melanoma diagnosis and significantly fewer melanoma deaths in the workforce than expected according to California mortality data². A subsequent multicentre observational study of 566 US adults with invasive melanoma found that patients who underwent a full-body skin examination by a physician in the year before diagnosis were twice as likely to have a thinner (≤ 1 mm) melanoma³. Men over the age of 60 benefited even more, with four times the odds of having a thinner tumour.

ROUTINE CHECKS

The most compelling population-based data are from a skin screening programme in the German state of Schleswig Holstein in which almost 20% of the adult population over the age of 20 — more than 360,000 people — were screened during a one-year period in 2003 and 2004. Five years later, melanoma mortality had declined by nearly 50% compared with surrounding states⁴. The results convinced Germany to roll out the programme nationwide to all adults aged 35 and older in 2008. So far, nearly 30 million screenings have been done, and data on the programme's effectiveness should soon be available.

These studies suggest that routine skin examination by primary-care doctors may be a practical strategy for reducing mortality from skin cancer. The USPSTF is reconsidering its recommendations and calling for a systematic review of current screening practices.

But for now, routine skin examination is far from the norm in the United States. Only 8–21% of people receive an annual skin exam from their doctor, even though primary-care physicians find more melanomas than do dermatologists. Americans make 1.7 visits to the doctor each year on average, and elderly people, who are at greatest

risk of fatal melanoma, make many more. So primary-care providers could be an important source of skin-cancer diagnosis and triage.

It should be possible to incorporate screening into the primary-care workflow. It would take a trained physician only a few minutes, as part of a routine physical exam, and could reveal melanomas in high-risk areas not easily viewed by the patient, such as the back. Not all doctors are trained to identify early skin cancer, however. A 1.5-hour, web-based scheme called INFORMED (Internet Curriculum For Melanoma Early Detection) provides training and clinical guidance for the early detection of melanoma and other common skin cancers by primary-care providers. Preliminary data from the two integrated health-care systems that have used INFORMED suggest that it improved the ability of doctors to recognize both benign and malignant skin lesions, and that it also decreased dermatology referrals, particularly to assess benign skin lesions.

Implementing widespread skin screening requires a shift in the way that primary care is delivered, however, as routine physical examinations are becoming less common. In the present atmosphere of cost-cutting, recommendations from the USPSTF and greater consensus from other organizations are crucial to ensure that patients receive appropriate screening for melanoma. In the interest of reducing deaths from melanoma, the USPSTF should consider all the recent data from worldwide screening efforts.

The growing body of evidence seems to tip the scales in favour of using screening by physicians for melanoma, but there are questions over how to do it. Who should perform, receive and pay

for the screens? Training ancillary health-care providers (such as nurse practitioners and physician assistants) could be beneficial, as well as compensating for carrying out full-body skin exams during routine medical visits. Preliminary data from Germany suggest that screening can save lives, but other studies are needed to understand the possible harms of skin screening, along with potential cost savings for the health system. These will vary from country to country but must be understood if skin screening is to be widely incorporated into primary care. ■

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