The Influence of Age and Sex on Reasons for Seeking and Expected Benefits of Skin Cancer Screening

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Objective: To determine the influence of age and sex on why individuals seek skin cancer screening and their understanding of its benefits.

Design: Voluntary survey.

Setting: Academic dermatology department.

Participants: Individuals 18 years or older being seen for skin cancer screening from May to October 2009.

Main Outcome Measures: Patients’ reasons for seeking and perceived benefits of skin cancer screening and understanding of screening recommendations.

Results: Of 546 patients, 487 eligible individuals (89.2%) participated in the survey. Most (80.6%) sought screening without a particular lesion of concern. Women were more likely than men to present with a lesion they believed could be skin cancer (24.6% vs 11.9%; P < .001) or because they were concerned about previous sun exposure (34.3% vs 23.8%; P < .05). Individuals younger than 50 years were more likely than older patients to seek screening because of a family history of melanoma (30% vs 18.9%; P < .01). Men 50 years or older were more likely than other patients to seek skin cancer screening because of a previous skin cancer diagnosis (64.6% vs 40.8%; P < .001). Most patients believed that screening reduces the risk of death from skin cancer and prevents skin cancer. There was no consensus among patients regarding the frequency with which healthy adults should be screened for skin cancer.

Conclusions: There is a need for better educational campaigns with specific recommendation for who should be screened for skin cancer. Men 50 years or older, the group at highest risk for death from melanoma, are most likely to seek screening only after being diagnosed as having a skin cancer.

Arch Dermatol. 2010;146(10):1097-1102

In the United States, approximately 62,480 new cases of melanoma were diagnosed and 8,420 deaths occurred from melanoma in 2008.1 The 5-year survival rates for melanoma decrease with increased depth of the primary lesion, and thus it is logical to assume that early detection of melanoma results in increased survival.2 Basal and squamous cell carcinomas, while more prevalent than melanoma, are rarely fatal.

See Practice Gaps at end of article

Screening for melanoma and nonmelanoma skin cancer involves a full-body examination of the skin by a trained professional. However, screening asymptomatic individuals without regard for risk factors can be low yield. For example, only 1.5 per 1000 people screened in the American Academy of Dermatology (AAD) national screening programs were confirmed to have a melanoma.3 Owing to feasibility issues, no studies have been performed, to our knowledge, to formally demonstrate that skin examinations reduce the risk of death from skin cancer. Despite the low probability of actually detecting melanoma through screening of asymptomatic individuals in the general population, great public interest exists for such screening from dermatologists, as evidenced by high attendance at skin cancer screenings, such as those run by the AAD, and by studies that have specifically surveyed patients about their preferences for skin cancer screening.4,5 However, the patients who seek skin cancer screening are not necessarily the patients who are at highest risk for developing or dying from melanoma. Specifically, although men 50 years or older have the highest rates of melanoma incidence and mortality, this group is generally underrepresented in melanoma screening activities.7

To our knowledge, no study has thoroughly investigated patients’ reasons for seeking skin cancer screening, perception

Arch Dermatol/Vol 146 (No. 10), Oct 2010 WWW.ARCHDERMATOL.COM

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of the efficacy of the skin cancer screening examination, and understanding of screening recommendations. Better understanding these factors may help in designing public education campaigns to more effectively encourage the highest-risk individuals to be screened for skin cancer. One study found that most patients who were diagnosed as having some form of skin cancer by visual screening reported a high satisfaction with and value for the screening examination, but it is unclear if patients understand the facts necessary for them to make an informed decision about receiving a skin cancer screening examination. We sought to determine what factors influence patients’ decisions to seek out skin cancer screening, what they perceive to be the value and benefits of the skin cancer screening examination, and their understanding of the frequency with which healthy adults should be screened. Patients being seen for a skin cancer screening examination were asked to complete a survey to help us evaluate these questions. We then analyzed these data for differences in sex, age, and skin cancer history.

### METHODS

This study was performed at the Department of Dermatology, University of Pittsburgh, Pittsburgh, Pennsylvania, from May through October 2009. Individuals who were 18 years or older and were seen specifically to receive a skin cancer screening examination were asked to complete a 12-question survey evaluating demographic factors, risk factors for melanoma, reasons for seeking skin cancer screening, perception of the benefits of skin cancer screening, and the recommended age at which screening should begin and the frequency with which healthy adults should be screened for skin cancer (eFigure; http://www.archdermatol.com). Screening was referred to as skin cancer screening rather than melanoma screening because often non-melanoma skin cancers are diagnosed during screening and because the more general term of skin cancer screening was thought to be more understandable to patients. Questions, with the exception of one requesting patient age, were given with answers in multiple-choice format. An “other” category was available for questions of race/ethnicity and reasons for seeking skin cancer screening. The survey was reviewed by the University of Pittsburgh institutional review board and was determined to be exempt from full board review.

The survey was given by the front desk staff to patients 18 years or older who were seen for skin cancer screening or a skin check when checking in for their appointment. Only those patients who had requested a visit over the telephone primarily for the purpose of skin cancer screening were asked to participate. Participants completed the survey prior to being seen by a physician and returned it to a clerical staff member, thus preventing any discussion of the survey’s content with the physician that could potentially influence patients’ answers. All results were collected anonymously. Reasons for not participating were not obtained. A total of 546 surveys were distributed, and of these 487 were completed, yielding an 89.2% response rate.

All answers were recorded as the respondent indicated unless ambiguity required adjudication, in which case two of us (R.A. and L.K.F.) agreed on a uniform response. For example, answers were regarded as “I don’t know” when more than 1 answer was chosen for a given question but a single response was expected. If no answer was chosen, the question was recorded as “no response.” On some surveys, patients skipped 1 or more questions, and only the completed questions from these surveys were used in analysis. There were 3 surveys that lacked data on age or sex, and these were not included in the analysis given the importance of these data in calculating the main outcome measures. In total, 473 patients answered all questions in the survey.

Demographic characteristics and melanoma risk factors were stratified separately by sex and by age (≥50 years vs <50 years). The rationale for using this age cutoff was based on the fact that screening for melanoma in the general population has been shown to be cost-effective if it starts at age 50 years, and because patients 50 years or older have been shown to be at higher risk of developing melanoma compared with patients younger than 50 years. Univariate comparisons by sex and by age were made using χ² test and 1-way analysis of variance (continuous variables) and the χ² test (categorical variables). When appropriate, Fisher exact test was used. P < .05 was considered statistically significant. All statistical analyses were performed using SPSS statistical software (version 17.0; SPSS Inc, Chicago, Illinois).

### RESULTS

#### DEMOGRAPHICS AND MELANOMA RISK FACTORS

The demographic characteristics and melanoma risk factors of patients who were seen for skin cancer screening are shown in Table 1. Patients were predominantly female (59.2%) and had a median age of 53 years. Most patients had a college education or higher (73.6%), and most reported their race as white (98.3%). Most patients (62.1%) reported at least 1 risk factor for melanoma, such as a personal history of skin cancer and/or a family history of melanoma. Men seeking screening tended to be older than women who sought screening (Table 1).

#### REASONS FOR SEEKING SKIN CANCER SCREENING

Reasons patients gave for seeking skin cancer screening are shown in Table 2. Most of the patients we surveyed sought out screening for skin cancer without having a particular lesion of concern, with only 19.4% of patients stating that they were worried about a particular spot on their skin. The most common reasons given for...
seeking skin cancer screening were a history of skin cancer, followed by concern about sun exposure, and a family history of nonmelanoma skin cancer. Patients were given the option of writing in reasons other than those listed for seeking skin cancer screening. The most frequently added reasons were the presence of many nevi or moles (13 patients [2.7%]), another physician (other than primary care provider [PCP]) recommended screening (20 patients [4.2%]), a history of nevus removal (25 patients [5.3%]), and skin cancer screening being part of their regular health care (33 patients [7.0%]).

The reasons for screening were analyzed separately by sex and age (≥50 years vs <50 years). Because men 50 years or older have a higher melanoma incidence and mortality rate than the general population, this group was analyzed independently as well. Finally, because individuals with a personal history of skin cancer have likely had increased contact with a dermatologist and may have been told that they needed regular skin cancer screening, this group was compared with those patients without a history of skin cancer. Women were more likely than men to seek skin cancer screening because they had a particular lesion that they were concerned might be a skin cancer (24.6% vs 11.9%; P = .001), because of a family history of nonmelanoma skin cancer (36.1% vs 18.7%; P < .001), and because of concern about sun exposure (34.3% vs 23.8%; P = .02). Patients younger than 50 years were much more likely than older patients to seek skin cancer screening on the recommendation of a friend (21.0% vs 8.7%; P < .001), whereas patients 50 years or older were much more likely to choose to be screened because of a previous diagnosis of skin cancer (59.2% vs 31.4%; P < .001).

As a group, men 50 years or older were much more likely to seek skin cancer screening because of a personal history of skin cancer compared with women and men younger than 50 years (64.6% vs 22.5%; P < .05). This group was also less likely than other patients to present with a particular spot that they were concerned might be skin cancer (11.0% vs 22.3%; P < .05), to report a family history of melanoma (16.5% vs 26.3%; P < .05) or nonmelanoma skin cancer (18.9% vs 32.7%; P < .05), and to seek screening based on the recommendation of a friend (7.0% vs 16.2%; P < .05). Despite being at higher risk for melanoma, men 50 years or older seemed no more likely than other patients to have been recommended to seek skin cancer screening by their PCP, although the study was not sufficiently powered to address this issue (data not shown).

Patients without a personal history of skin cancer (52.9% of those screened) were more likely than patients who reported a previous history of skin cancer to seek screening because of a family history of melanoma (28.4% vs 18.4%; P < .05) and because a friend (19.6% vs 7.6%; P < .001), or their PCP (21.6% vs 9.0%; P < .001) had recommended screening.

Our survey did not distinguish between those patients who were sent by their PCP simply for screening from those patients sent because the PCP had noted a specific lesion of concern. However, 63.0% of patients who chose PCP referral as a reason for seeking skin cancer screening did not list the presence of a lesion that they were concerned might be skin cancer as a reason for their visit. This suggests that most patients who were sent by their PCP were referred for general skin cancer screening.

### Table 2. Reasons for Seeking Skin Cancer (SC) Screening

<table>
<thead>
<tr>
<th>Reason for Seeking Screening</th>
<th>Overall</th>
<th>Female</th>
<th>Male</th>
<th>&lt;50 y</th>
<th>≥50 y</th>
<th>Male ≥50 y</th>
<th>All Others</th>
<th>Personal History of Any SC</th>
<th>No Personal History of Any SC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total No.</td>
<td>473</td>
<td>280</td>
<td>193</td>
<td>210</td>
<td>263</td>
<td>127</td>
<td>346</td>
<td>223</td>
<td>250</td>
</tr>
<tr>
<td>Worried about a particular lesion</td>
<td>92 (19.4)</td>
<td>69 (24.6)</td>
<td>23 (11.9)</td>
<td>44 (21.0)</td>
<td>48 (18.3)</td>
<td>14 (11.9)</td>
<td>78 (22.5)</td>
<td>37 (16.6)</td>
<td>55 (22.0)</td>
</tr>
<tr>
<td>Personal history of SC</td>
<td>223 (47.1)</td>
<td>123 (43.9)</td>
<td>100 (51.8)</td>
<td>66 (31.4)</td>
<td>157 (59.7)</td>
<td>82 (64.6)</td>
<td>141 (40.8)</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Family history of melanoma</td>
<td>112 (23.7)</td>
<td>75 (26.8)</td>
<td>37 (19.2)</td>
<td>63 (30.0)</td>
<td>49 (18.6)</td>
<td>21 (16.5)</td>
<td>91 (26.3)</td>
<td>41 (18.4)</td>
<td>71 (28.4)</td>
</tr>
<tr>
<td>Family history of NMSC</td>
<td>137 (29.0)</td>
<td>101 (36.1)</td>
<td>36 (18.7)</td>
<td>63 (30.0)</td>
<td>74 (28.1)</td>
<td>24 (18.9)</td>
<td>113 (32.7)</td>
<td>68 (30.5)</td>
<td>69 (27.6)</td>
</tr>
<tr>
<td>Friend recommended</td>
<td>66 (14.0)</td>
<td>36 (12.9)</td>
<td>30 (15.5)</td>
<td>22 (10.9)</td>
<td>22 (8.4)</td>
<td>17 (7.9)</td>
<td>56 (16.2)</td>
<td>17 (7.6)</td>
<td>49 (19.6)</td>
</tr>
<tr>
<td>Has a friend with SC</td>
<td>15 (3.2)</td>
<td>12 (4.3)</td>
<td>3 (1.6)</td>
<td>6 (2.9)</td>
<td>9 (3.4)</td>
<td>3 (2.5)</td>
<td>10 (2.9)</td>
<td>13 (4.8)</td>
<td>11 (4.4)</td>
</tr>
<tr>
<td>Media recommended</td>
<td>33 (7.0)</td>
<td>23 (8.2)</td>
<td>10 (5.2)</td>
<td>14 (6.7)</td>
<td>19 (7.2)</td>
<td>7 (5.5)</td>
<td>26 (7.5)</td>
<td>12 (5.4)</td>
<td>21 (8.4)</td>
</tr>
<tr>
<td>PCP recommended</td>
<td>75 (15.9)</td>
<td>42 (15.0)</td>
<td>32 (16.5)</td>
<td>40 (19.0)</td>
<td>34 (12.9)</td>
<td>15 (11.8)</td>
<td>59 (17.1)</td>
<td>20 (9.0)</td>
<td>54 (21.6)</td>
</tr>
<tr>
<td>Worried about sun exposure</td>
<td>142 (30.0)</td>
<td>96 (34.3)</td>
<td>46 (23.8)</td>
<td>67 (31.9)</td>
<td>75 (28.5)</td>
<td>33 (26.0)</td>
<td>109 (31.5)</td>
<td>63 (28.3)</td>
<td>79 (31.6)</td>
</tr>
</tbody>
</table>

Abbreviations: NA, not applicable; NMSC, nonmelanoma skin cancer; PCP, primary care provider; SC, skin cancer.

a Boldface indicates statistical significance.

b All others are females and males younger than 50 years.

c P < .05.
d P < .01.
e P < .001.

### PATIENT PERCEPTION OF THE BENEFITS OF SKIN CANCER SCREENING

Included on the survey was a series of questions to determine if patients believed that skin cancer screening has been shown to reduce the risk of death from skin cancer or to prevent skin cancer and to see how patients rated the importance of skin cancer screening in health maintenance compared with the Papanicolaou (Pap) smear, mammography, and colonoscopy. Although 2 of the 3 tests are sex-specific, these tests were chosen as having the most evidence and validation in clinical trials supporting their role in decreasing cancer mortality. The questions and responses are shown in Table 3. The responses were highly uniform across all groups queried, with most of the participants believing that skin cancer screening had been
proven to both prevent skin cancer (72.3%) and reduce the risk of death from skin cancer (89.9%). The only statistically significant differences seen among patients were that those 50 years or older, and men 50 years or older in particular, were more likely than other patients to believe that skin cancer screening has been shown to prevent skin cancer (89.9% vs 82.3%; P = .04, and 93.5% vs 84.2%; P = .02, respectively). Most patients also believed that the skin cancer screening examination was just as important as the Pap smear, mammography, and colonoscopy for preventing cancer-related death (91.6%, 91.2%, and 89.7%, respectively). There was no statistical significance in the responses of men vs women to questions comparing skin cancer screening with mammography, Pap smear, or colonoscopy (data not shown).

PATIENT UNDERSTANDING OF RECOMMENDED FREQUENCY OF SKIN CANCER SCREENING

Patients were given several options of recommendations for the age at which skin cancer screening should begin and the frequency with which screening should be performed in healthy adults. Table 4 presents the recommendation options and responses as well as the mean age of patients who chose each option. Younger patients were more likely to believe that screening should begin at age 18 years, and older patients were more likely to believe that screening should begin at age 50 years (P < .05). Over 45% of patients believed that no specific recommendations exist for skin cancer screening or did not know how often skin cancer screening should be performed.

This study gives us insight into the motivating factors, understanding, and expectations of patients seeking skin cancer screening. Although melanoma has the highest prevalence among men 50 years or older, this group represented only 26.8% of the surveyed population presenting to us for screening. This finding is consistent with a review of the AAD skin cancer screening data, which report that men older than 50 years comprised 25% of those screened but comprised 44% of screened patients with a confirmed melanoma. In total, 20% of those who sought screening in our study were considered to be at extremely low risk for melanoma in that they were younger than 50 years, lacked a personal history of skin cancer as well as a family history of melanoma, and were not worried about a particular spot being cancerous. Although there is little danger in screening low-risk individuals, there is concern that increased screenings will inevitably lead to increased biopsies of benign lesions in a population with a low probability of melanoma.13

Men 50 years or older were more likely than other patients to seek screening because they had been diagnosed as having a skin cancer previously and were less likely to have noticed a lesion on their skin that was a cause for concern prior to their examination. Thus, although basal and squamous cell carcinomas are rarely fatal, this higher-risk group of patients may be more likely to comply with screening recommendations following a diagnosis of nonmelanoma skin cancer, giving physicians a window of opportunity to encourage older men to have regular full-body examinations, potentially resulting in earlier detection of melanoma in these patients.

In our study, most patients incorrectly believed that skin cancer screening has been shown to prevent skin cancer. When asked to compare skin cancer screening with colonoscopy, mammography, and Pap smears in terms of importance for preventing cancer-related death, nearly all patients believed the skin cancer screening examination to be equally valuable to these prospectively studied and proven screening tests,12 although no randomized prospective screening trials have shown evidence for or against skin cancer screening in the general population. Our patients’ responses were not attributable to a lack of education because 73.6% of participants were college graduates. Our findings are consist-

Table 3. Patient Beliefs About the Value of Skin Cancer Screening

<table>
<thead>
<tr>
<th>Statement</th>
<th>Response</th>
<th>Overall, No. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has skin cancer screening been shown to reduce the risk of death from skin cancer?</td>
<td>Yes</td>
<td>427 (89.9)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>1 (0.2)</td>
</tr>
<tr>
<td>Has skin cancer screening been shown to help prevent skin cancer?</td>
<td>Yes</td>
<td>348 (72.3)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>54 (11.2)</td>
</tr>
<tr>
<td>It is just as important to get regular skin examinations to reduce the risk of death from skin cancer as it is for women to get regular Pap smears to reduce the risk of death from cervical cancer</td>
<td>Agree</td>
<td>437 (91.6)</td>
</tr>
<tr>
<td></td>
<td>Disagree</td>
<td>5 (1.0)</td>
</tr>
<tr>
<td>It is just as important to get regular skin examinations to reduce the risk of death from skin cancer as it is for women to get regular mammograms to reduce the risk of death from breast cancer</td>
<td>Agree</td>
<td>45.9 (91.2)</td>
</tr>
<tr>
<td></td>
<td>Disagree</td>
<td>7 (1.3)</td>
</tr>
<tr>
<td>It is just as important to get regular skin examinations to reduce the risk of death from skin cancer as it is for adults to get regular colonoscopy to reduce the risk of death from colon cancer</td>
<td>Agree</td>
<td>428 (89.7)</td>
</tr>
<tr>
<td></td>
<td>Disagree</td>
<td>8 (1.7)</td>
</tr>
</tbody>
</table>

Table 4. Patient Age and Beliefs About Skin Cancer Screening Recommendations

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Patients, No. (%)</th>
<th>Age, Mean (SD), y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yearly starting at age 18 y</td>
<td>165 (34.7)</td>
<td>44.7 (15.7)</td>
</tr>
<tr>
<td>Once at age 50 y</td>
<td>8 (1.7)</td>
<td>58.3 (17.1)</td>
</tr>
<tr>
<td>Yearly starting at age 50 y</td>
<td>61 (12.8)</td>
<td>60.9 (14.0)</td>
</tr>
<tr>
<td>Every 2 y starting at 50 y</td>
<td>26 (5.5)</td>
<td>55.9 (13.7)</td>
</tr>
<tr>
<td>There are no specific recommendations</td>
<td>81 (17.0)</td>
<td>49.8 (16.7)</td>
</tr>
<tr>
<td>for skin cancer screening</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I don't know</td>
<td>135 (28.4)</td>
<td>52.4 (15.7)</td>
</tr>
</tbody>
</table>

Abbreviation: Pap, Papanicolaou.

a Question: Based on your understanding, please mark if you agree or disagree with the following statements.

COMMENT
tent with those of other studies that have shown that patients tend to overestimate the relative importance of risk factors for developing cancer, incidence and mortality rates of cancer, and the value of cancer screening. In Australia, where large public education programs for melanoma have existed for years, fewer people accurately identified the probability of death from melanoma after nearly 11 years of these programs, with a significant underestimation of survival and overestimation of the lifetime risk of developing skin cancer. The fact that so many patients believe that skin cancer screening can prevent skin cancer is a particular cause for concern because it calls into question whether patients are truly informed when they consent to screening and may have implications for patients’ likelihood to seek attention for a new or changing lesion.

Interestingly, although patient responses about the benefits of skin cancer screening were quite uniform in our study, their responses to questions about current skin cancer screening recommendations were very diverse. This is not surprising because the recommendations for skin cancer screening vary widely among different organizations. For example, the US Preventive Services Task Force makes no recommendations for or against screening, yet annual screening of females 13 years or older for skin cancer based on age and risk factors is recommended by the American College of Obstetricians and Gynecologists. One study found that only 33% of surveyed dermatologists were aware of any skin cancer screening guidelines from major health policy organizations.

Our study does have several limitations. First, our findings may not be applicable to all populations because the setting was in an academic referral center and occurred in 1 geographic location. Given the setting, our patient population may be at higher risk than the average population that seeks skin cancer screening. We also had a high percentage of college-educated individuals in our surveyed population. This may reflect the university setting or patient screening preferences. Studies have shown that patients from higher socioeconomic groups are more likely to seek skin cancer screening, and, although they have higher rates of melanoma incidence, they have lower case-fatality rates. Finally, owing to the anonymous nature of the survey, we cannot correlate responses with the outcome of the screening process (ie, if a skin cancer was detected during the visit).

Educational campaigns that both clarify the benefits of skin cancer screening—specifically, early detection of skin cancer—and reinforce the importance of skin cancer screening for high-risk patients should be considered. Efforts to encourage screening should include specific guidelines on the age at which skin cancer screening should begin and the frequency with which it should be repeated. Of course, this will require that a consensus be reached on the matter. Guidelines for a targeted screening program have been proposed by others. Screening the general population for melanoma once at age 50 years and screening patients who have a first-degree relative with melanoma every 2 years, the options chosen the least frequently by our participants as the recommended guidelines for skin cancer screening in healthy adults, have both been shown to be cost-effective. Perhaps this is a good place to start because prospective screening trials are unlikely to be performed in the near future. Better communication with the public in the form of specific guidelines, with an emphasis on encouraging screening of older men, may allow us to reach those patients who would most benefit from screening and increase the yield of early melanoma diagnoses during screening.

Accepted for Publication: February 26, 2010.
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Author Contributions: Dr Ferris had full access to all the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis. Study concept and design: Andrulonis and Ferris. Acquisition of data: Andrulonis, Geskin, and Ferris. Analysis and interpretation of data: Andrulonis, Secrest, McGuire, Geskin, and Ferris. Drafting of the manuscript: Andrulonis, McGuire, and Ferris. Critical revision of the manuscript for important intellectual content: Andrulonis, Secrest, Geskin, and Ferris. Statistical analysis: Secrest. Obtained funding: Andrulonis and Ferris. Administrative, technical, and material support: Andrulonis, Geskin, and Ferris. Study supervision: Ferris.

Financial Disclosure: Dr Ferris has served as an investigator and consultant for Electro-Optical Science Inc and as an investigator for DermTech International. Dr Geskin has served as an investigator for Electro-Optical Sciences Inc.

Funding/Support: This study was supported in part by The University of Pittsburgh Dean’s Summer Research Program.

Online-Only Material: The eFigure is available at http://www.archdermatol.com.

REFERENCES

Preventive Services Task Force, a federally supported body, recommends the patient care setting full-body skin cancer screening for those with family history of melanoma, including those with a personal history of melanoma, particularly men 50 years or older. If in doubt, these events should be targeted to the audiences at highest risk for skin cancer.

Creating consensus guidelines based on best available evidence is essential. Those responsible for promoting skin cancer screening should make particular efforts to promote these events to the audiences at highest risk for melanoma, including those with a personal history of skin cancer, those with family history of melanoma, and patients, particularly men 50 years or older. If in the patient care setting full-body skin cancer screenings are routinely performed indiscriminately, then it is time to consider targeting those who have risk factors and become more discriminating about screening low-risk patients. It may be possible to make small improvements in the access to dermatology care by minimizing time spent in low-risk screening activities, and it may lower the numbers of unnecessary biopsies. Dermatologists can teach these providers that men 50 years or older have the highest prevalence and mortality from melanoma. More education for dermatologists about evidence related to the value and cost of skin cancer screening is needed.

Barriers to change include the added difficulty in promoting a screening event to a particular population at risk as opposed to broad marketing of the event. In addition, our fee-for-service health care model currently rewards, or at least does not discourage, increased numbers of areas examined and increased biopsies of benign lesions. Other barriers include the power of anecdotes, as nearly every dermatologist has an example of the low-risk patient for whom skin cancer screening examination uncovered a melanoma that was completely unrelated to the chief complaint.

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Financial Disclosure: None reported.
