Skin Cancer Control in Maryland

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Skin Cancer Statistics

- Skin cancer accounts for 50% of all new cancers.
- More than 1 million new cases of skin cancer will be diagnosed in the United States this year.
- 59,580 persons are expected to be diagnosed with melanoma this year in the US.
- Melanoma is the most common cancer is people age 25 to 29 years old.

Maryland Skin Cancer Rates

• In 2001, a total of 991 persons in Maryland were diagnosed with melanoma of the skin.
• The age adjusted incidence rate for melanoma for 2001 is 18.6 per 100,000 population (17.4-19.8, 95% C.I.).
• The Maryland rate is similar to the 2001 U.S. SEER age-adjusted incidence rate of 18.7 per 100,000 population for melanoma.
Maryland Skin Cancer Rates

- In 2001, a total of 137 persons died of melanoma in Maryland.
- The age-adjusted mortality rate for melanoma in Maryland is 2.7 per 100,000 population (2.2-3.2, 95% C.I.).
- This rate is the same as the 2001 U.S. melanoma mortality rate of 2.7 per 100,000 population.
- Maryland is ranked 38th for melanoma mortality among the states and the District of Columbia for the period 1997-2001.
Melanoma Incidence and Mortality

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**Trend**

Melanoma incidence rates have increased an average of 3.3% per year from 1997 to 2001 in Maryland.

Melanoma mortality rates increased an average of 3.2% per year in Maryland from 1997 to 2001.

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*Rates are age-adjusted to 2000 U.S. standard population*
*Maryland Cancer Registry, 1997-2001*
*Maryland Division of Health Statistics, 1997-2001*
Melanoma-Gender Specific

Melanoma Incidence and Mortality Rates
by Gender, Maryland, 2001

Gender-Specific Rates

Males had statistically significantly higher incidence and mortality rates for melanoma than females. The mortality rate was more than double for males than for females.

Rates are age-adjusted to 2000 U.S. standard population
Maryland Cancer Registry, 2001
Maryland Division of Health Statistics, 2001
# County Melanoma Death Rates

<table>
<thead>
<tr>
<th>County</th>
<th>Met Healthy People Objective of 2.5?</th>
<th>Annual Death Rate/ deaths per 100,000 (95% CI)</th>
<th>Ave Deaths/Yr</th>
<th>Rate Period</th>
<th>Recent Trend</th>
<th>Recent Annual Percent Change in Death Rates (95% CI)</th>
<th>Recent Trend Percent</th>
<th>Recent Trend Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carroll County</td>
<td>No</td>
<td>4.6 (3.1, 6.5)</td>
<td>7</td>
<td>1998 - 2002</td>
<td>stable</td>
<td>2.2 (-0.4, 4.8)</td>
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<td>1978 - 2002</td>
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<tr>
<td>St. Marys County</td>
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<td>4.6 (2.6, 7.5)</td>
<td>3</td>
<td>1998 - 2002</td>
<td>**</td>
<td>**</td>
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<tr>
<td>Allegany County</td>
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<td>3.4 (1.9, 5.8)</td>
<td>3</td>
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<td>stable</td>
<td>1.7 (-1.7, 5.2)</td>
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<td>1978 - 2002</td>
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<tr>
<td>Anne Arundel County</td>
<td>No</td>
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<td>14</td>
<td>1998 - 2002</td>
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<td>1.5 (0.1, 3.0)</td>
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<td>1978 - 2002</td>
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<tr>
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<td>24</td>
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<td>stable</td>
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<td>1978 - 2002</td>
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<tr>
<td>Harford County</td>
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<td>1998 - 2002</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
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<tr>
<td>Montgomery County</td>
<td>No</td>
<td>2.6 (2.2, 3.2)</td>
<td>22</td>
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<td>stable</td>
<td>0.2 (-1.1, 1.6)</td>
<td></td>
<td>1978 - 2002</td>
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<tr>
<td>Frederick County</td>
<td>Yes</td>
<td>2.3 (1.4, 3.6)</td>
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<td>**</td>
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<td>Prince Georges County</td>
<td>Yes</td>
<td>1.6 (1.2, 2.2)</td>
<td>10</td>
<td>1998 - 2002</td>
<td>falling</td>
<td>-1.8 (-3.3, -0.2)</td>
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<td>1978 - 2002</td>
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<tr>
<td>Baltimore City</td>
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<td>1.6 (1.2, 2.1)</td>
<td>11</td>
<td>1998 - 2002</td>
<td>stable</td>
<td>0.2 (-2.0, 1.7)</td>
<td></td>
<td>1978 - 2002</td>
</tr>
</tbody>
</table>
Healthy People 2010

• Reduce melanoma deaths to 2.5 per 100,000.

• Increase to 75% the proportion of persons who use at least one of the following:
  ❖ avoid the sun between 10am-4pm.
  ❖ wear sun-protective clothing.
  ❖ use sunscreen SPF ≥ 15.
  ❖ avoid artificial sources of ultraviolet light.
Prevention vs. Early Detection

• CDC--- interventions recommended:
  ❖ Education & policy related to primary schools and recreational setting.
  ❖ Recommendations is based on review of published papers.
Skin Cancer Screening

• US preventative services task force:
  ✠ Evidence is insufficient to recommend for or against routine screening for skin cancer using a total body skin exam for the early detection of skin cancer.

• NCI and AAD support skin cancer screening.
MELANOMA-Early Detection

• Early Detection saves lives:
  ♦ 5 yr survival 94%-localized disease.
  ♦ 5 yr survival 16%-metastatic disease.

• AAD skin cancer screening programs:
  ♦ 1985-1999 found nearly 30% of subjects had lesions suspicious for skin cancer.

Geller et al. JAAD 2003
MELANOMA-Early Detection

- Patients are less likely to detect melanoma if it is on their back.
- Tumors in less visible anatomic sites tend to be thicker than in visible areas.
- Geller et al found 63% of 261 pts with melanoma had seen a physician the year prior to diagnosis and only 20% had a skin exam.¹

J Gen Intern Med 1992
Melanoma depth: Impact of surveillance

• Yale pigmented lesion clinic-retrospective cohort study:
  ❖ Initial melanomas detected by a dermatologist-more likely to be 0.75mm or less in depth than by another physician.
  ❖ Dermatologists discovered 80% of second primary melanomas.

Tanning Beds-melanoma risk

• Meta-analysis Jan 1, 1984 to April 2004.
  ❖ 9 case-control and 1 cohort study.
  ❖ Assessment of melanoma risk among subjects who reported "ever" being exposed compared with those "never" exposed.

• A positive association was found between exposure and risk (summary OR, 1.25; 95% CI, 1.05-1.49).

Cancer Epidemiol Biomarkers Prev. 2005 Mar;14(3):562-6...
Tanning Bed Use-Children

- A cross-sectional study of 10,079 boys and girls (12-18 yrs) in 1999.
- Self-report questionnaires with the children of the participants from the Nurses Health Study (Growing Up Today Study).
- Nearly 10% of respondents used a tanning bed during the previous year.
  - Girls-more likely to report tanning bed use (14.4 vs 2.4).
  - Older girls (ages 15-18) -more likely than younger girls (ages 12-14) to report tanning bed use (24.6% vs 4.7).
  - **Tanning bed use increased from 7% among 14-year-old girls to 16% by age 15, and more than doubled again by age 17 (35%; N = 244).**

Maryland Skin Cancer Plan

• School based education.
• Regulation of tanning bed use.
• Encourage health care providers to perform skin cancer screening.
• Improve provider education on recognition of suspicious lesions.
• Increase access to dermatologists in underserved areas.
Education and Policy

• 2001-Maryland Department of Education developed Guidelines for sun protection:
  ❖ Resources for environment assessment.
  ❖ Development of sun-safe policies.
  ❖ Sunscreen can be brought to school.
Coalition for Skin Cancer Prevention

• Utilize 5-channel model of ACS
  ❖ Schools
  ❖ Child care centers
  ❖ Physicians offices
  ❖ Recreation centers
  ❖ media
Coalition for Skin Cancer Prevention

• Outreach w/ Sunguard man.
• Yearly poster contest for K-8th graders.
• Assist with education of child providers using ACS Sun Safe Preschool Curriculum.
• Advises legislators on sunscreen and tanning bed policy.
• Placement of informative brochures in physicians offices and recreation sites.
Missing Links

- Education of at risk adults.
- Education of physicians.
- Increase access to dermatologists in underserved areas.
  - Telemedicine +/- mobile units.
- Health Disparity: geographic and persons of color.
Education and Skin Cancer Screening of High Risk Adults

• Outdoor workers: watermen, construction workers, farmers.
• Maryland Watermen SunSmart Project:
  ❖ Education + Skin Cancer Screening.
  ❖ Pre and Post tests.
  ❖ 77 watermen currently enrolled.

• Key: Effective intervention with targeting organized groups or associations.
SUNSCREEN USE IN WATERMEN

![Bar graph showing sunscreen use frequency by body parts.](image)
EFFECTIVE INTERVENTIONS WITH WATERMEN

• Three channels:
  - Local networking
  - Teach practical/realistic methods of change
  - Targeted/tailored interventions
Precaution Adoption Process Model

- ACTING
- DECIDING ABOUT ACTING
- ACKNOWLEDGE PERCEIVED PERSONAL RISK
- UNENGAGED STAGE
Education of Physicians

• Practicing Physicians:
  ❖ Interactive CME taught by dermatologists.
  ❖ Accessible to physicians in geographically underserved regions of the state.

• Medical Students:
  ❖ Include skin cancer education in the core curriculum.
Education of Physicians

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  ❖ Interactive CME taught by dermatologists.
  ❖ Target audience: physicians in geographically underserved regions of the state.

• Medical Students:
  ❖ Include skin cancer education in the core curriculum.
DEVELOPMENT AND VALIDATION OF A NOVEL SKIN CANCER EDUCATION CURRICULUM FOR MEDICAL STUDENTS

Daven Doshi¹, Kimberly Firth¹, Matthew Mintz², Alison Ehrlich¹
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Washington, DC
OBJECTIVE

To develop and test a novel skin cancer education curriculum for third year medical students aimed at increasing student knowledge, visual detection skills of benign vs. malignant lesions and awareness of skin cancer.
METHODS

Curriculum

Didactics
- Skin CA: etiology, epidemiology & treatment
- Detection & Prevention
- The Basic Skin Exam & Triaging suspicious lesion

Day with Dermatologist
Focus: Basic Skin Exam & Triaging a Lesion

Educational Packets
- Review articles
- NMSC/melanoma
- Digital photos melanoma BCC & SCC
- Skin Cancer Quick Reference Card
RESULTS: KNOWLEDGE & VISUAL DETECTION

Control
p = .23

Intervention Arm
p < .001

Avg. # correct

Pre-Test Combined  Post-Test Combined
RESULTS: ATTITUDES & BELIEFS

How confident do you feel talking with a patient about the importance of sun protection?

Pre-Test

- Very Confident: 44%
- Somewhat Confident: 14%
- Not Very Confident: 22%
- Not Confident at all: 20%

Post-Test

- Very Confident: 65%
- Somewhat Confident: 8%
- Not Very Confident: 0%
- Not Confident at all: 0%

Pre-Test

Post-Test
RESULTS: ATTITUDES & BELIEFS

How confident do you feel in visually detecting a suspicious (potential of malignancy) cutaneous lesion?

<table>
<thead>
<tr>
<th>Attitude</th>
<th>Pre-Test</th>
<th>Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Confident</td>
<td>26%</td>
<td>58%</td>
</tr>
<tr>
<td>Somewhat Confident</td>
<td>14%</td>
<td>30%</td>
</tr>
<tr>
<td>Not Very Confident</td>
<td>2%</td>
<td>8%</td>
</tr>
<tr>
<td>Not Confident at all</td>
<td>2%</td>
<td>4%</td>
</tr>
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</table>
Future Goals

• Expand current programs for school age children.
  ❖ Discourage tanning bed use
• Implement education and screening programs for at risk adults.
• Legislation for tanning bed use.
• Increase access to dermatologists.
• Skin cancer education for healthcare providers.
Acknowledgements

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  - CDC/NIOSH
  - Skin Cancer Foundation