Healthy IU and IU Human Resources in partnership with IU Melvin and Bren Simon Comprehensive Cancer Center and the Indiana Cancer Consortium

Skin Cancer Prevention 101

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June 17, 2022
Housekeeping

✔ Webinar format; only panelists are on camera

✔ Chat is disabled. Use the Q&A box for questions
  We will answer questions at the end of the session.

✔ We are recording
  Recording & slides will be sent following the session.
Skin Cancer Awareness

Mary Robertson, MPH
Director, Indiana Cancer Consortium
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What is Skin Cancer?

Two general types of skin cancer: melanoma and non-melanoma skin cancers (NMSC), which include basal cell and squamous cell carcinomas.

Skin cancer is an uncontrolled growth and spread of cells or lesions in the epidermis, the outer layer of skin.
Did you Know?

Exposure to sun lamps or sunbeds is classified as a known human carcinogen, the same classification as tobacco?²
Did you Know?

Skin cancers affect more people than lung, breast, colon, and prostate cancers combined.
2008 – 2017 age-adjusted incidence and mortality rates have decreased, indicating progress continues to be made in early detection and treatment of cancer.²
<table>
<thead>
<tr>
<th></th>
<th>Indiana Melanoma Incidence Rates 2017²</th>
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<tbody>
<tr>
<td><strong>Males</strong></td>
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<tr>
<td>1,680 new cases</td>
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<td>8.4% of cancers</td>
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<td>diagnosis in Indiana</td>
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<td><strong>Females</strong></td>
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<td>1,188 new cases</td>
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<tr>
<td>5.9% of cancers</td>
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<td>5ᵗʰ leading cancer</td>
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<tr>
<td>diagnosis in Indiana</td>
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</table>
Data Tells a Story

- Lifetime risk of developing melanoma is approximately one in 38 for whites, one in 1,000 for African Americans, and one in 167 for Hispanics.¹

- In Indiana
  - New cases of melanoma: 2,250
Who Gets Melanoma/Skin Cancer?³

- Age
- Sex
- Race
- Fair- to light-skin complexions
- Hair and eye color
- Multiple or atypical nevi (moles)
- Family history
- Excessive exposure to UV radiation
- History of sunburn
- Disease that suppress the immune system
- History of skin cancer
- Occupational exposure
Reducing Your Risk – Sun Safety

The CDC recommends practicing sun safety year-round, not just in summer. In addition to wearing sunscreen, they recommend:

- Using umbrellas or trees as shade when outside
- Wearing wrap-around sunglasses when possible as they block UV rays from the side

For more sun safety tips, see: https://www.cdc.gov/cancer/skin/basic_info/sun-safety.htm
Choosing a Proper Sunscreen

Proper sunscreen will help protect your skin against skin cancer, including melanoma.

1 in 5 Americans will develop skin cancer in their lifetime.
Melanoma & Other Skin Cancer Resources

- Centers for Disease Control and Prevention
  - https://www.cdc.gov/cancer/skin/index.htm
- American Cancer Society
- Indiana Cancer Consortium’s 2021-2022 Cancer Control Plan
  - https://indianacancer.org/iccp-report/
- Skin Cancer Foundation Support & Resources
  - https://www.skincancer.org/treatment-resources/support-resources/
No one is immune to skin cancer.

References

1. National Cancer Institute, “Melanoma Treatment – Patient Version”


3. American Cancer Society, “Risk Factors for Melanoma Skin Cancer”

4. Centers for Disease Control and Prevention, “Sun Safety”
   - https://www.cdc.gov/cancer/skin/basic_info/sun-safety.htm

5. American Cancer Society, “Signs and Symptoms of Melanoma Skin Cancer”
Thank You!

For more information on the Indiana Cancer Consortium:

Contact:
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Find us on social media:
@IndianaCancerConsortium
@IN_Cancer
Indiana Cancer Consortium
Skin Cancer Prevention & Treatment

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Surgical Director, Melanoma
Indiana University School of Medicine
Member, Indiana University Melvin and Bren Simon Comprehensive Cancer Center

No Conflicts related to topic
Melanoma

Figure D4d. Incidence rates of some common cancers that are increasing - delay-adjusted cancer incidence, melanoma of skin (White only): 1975-2003

Rising 1981 - 2003
APC = 3.27

Rising 1975 - 1981
APC = 6.30

Year of diagnosis

Rate per 100,000

No Healthy People 2010 target.
Source: SEER Program, National Cancer Institute. Incidence data are from the SEER 9 areas (http://seer.cancer.gov/registries/terms.html).
Data are age-adjusted to the 2000 standard using age groups:<1, 1-4, 5-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-79, 80-84, 85+
Analysis uses the 2000 Standard Population (Census P25-1130) as defined by NCI (http://seer.cancer.gov/stdpopulations/).
Incidence rates for melanoma of the skin are based on a race-specific population.
Weighted regression lines (utilizing standard errors) are calculated using the Joinpoint (Joinpoint) Regression Program, Version 3.0, April 2005, National Cancer Institute.
* The Annual Percent Change (APC) is statistically significant at the 0.05 level.
Changing Times and Habits
Skin Cancer: Australia

Queensland:

• Highest age adjusted risk
  • Male: 2389/1000,000
  • Female 1908/100,000
Skin: YOUR BIGGEST ORGAN....

- Why do we have skin?
  - Protection
    - From
    - EVERYTHING
- Durable?
- Heals..... Most of the time
- IT DOES AGE
- It regenerates
- But it pays the price, and we MUST PROTECT
MSC Melanotic Skin Cancer - Non –MSC

• Who gets its?
• Why do they?
• What can be done to prevent it?
• What do we understand about these lesions?
• How does that impact how we screen, diagnose, and treat?
Skin Cancer

- Risk Factors Sun – UVA, UVB, UVC
- Skin Type
- Ethnicity
- Genetic
- Predispositions
- Immune Factors
- Ionizing Radiation
Skin Cancer

- Chemical Exposure
- Medical History
- Diet
- Prevention
Cancer Mortality

Mortality, All Cancer Sites
Both Sexes, All Ages

Deaths per 100,000 resident population

Created by statecancerprofiles.cancer.gov on 08/20/2006 3:01 pm.
Regression lines calculated using the Joinpoint Regression Program.

Source: Death data provided by the National Vital Statistics System
public use data file. Death rates calculated by the National Cancer
Institute using SEER*Stat. Death rates are age-adjusted to the 2000
US standard population by 5-year age groups. Population counts for
denominators are based on Census populations as modified by NCI.
Skin Cancer

- Phenotype
  - Melanin content of exposed skin
    - Tanners vs NON- Tanners
    - Fretzpatrick and Vitaliano/Uach Classification
  - Red, Blond, and Brunette hair with fair skin that freckles
  - Caucasians of Celtic ancestry
  - Irregular sun exposures
  - Burning
  - Southern migration, equatorial displacement
Skin Cancer
Genetic Syndromes
Based on DNA repair defect or fragility

- Dysphasic Nevis Syndrome
- Xeroderma Pigmentosa (XP)
- Nevoid Basal Cell Syndrome
- Albinism
- Others
Skin Cancer
Precursor Lesions

• Scc: Actinic Keratosis AK
  • May be associated with exposure to:
    • Sun
    • Ionizing radiation
    • Arsenicals
    • Polycyclic hydrocarbons
  • 20% progress to invasive SCC
Skin Cancer
Precursor Lesions

- SCC: Bowen’s Disease
  - Sun exposed and NON-sun exposed areas
    - Arsenicals
    - Ionizing Radiation
    - HPV?
    - Viral Agents
    - ACTINIC DAMAGE
  - 1/1000 progress to invasive SCC
Skin Cancer
Pre-Disposing States

- Immunosuppressant
  - Organ transplants
  - Immunosuppressant Rx
  - Occult malignancy
  - HIV

- Failure or suppression of dermal immune surveillance
Skin Cancer
Pre-Disposing States

Immunosuppressant States

• Leukemia
• Lymphoma
• Epidermolysis verruciformis
• Mycosis Fungoides Pt, topical nitrogen mustards
• Pts immunosuppressed for: renal dz, RhA, aplastic anemias etc....
• AGE
Immunosuppressive Impact of UVB

Ultraviolet B Radiation

- DNA damage
- Release of cytokines
  - Induction of suppressor T cells

- Release of immunosuppressive cytokines
- Redirection of immune response

IL-10

TNF-α

other

T effector

T suppressor
Suppressor and Effectors Impact of UVB

Ultraviolet B Radiation

Contact allergen

Migration of Langerhans cells from skin to draining lymph nodes

Suppressor pathway
Altered antigen presentation
Reduced Th1 lymphocyte stimulation
Reduced costimulatory molecules (B7-1, B7-2)

Effector pathway
Efficient antigen presentation
Th1 lymphocyte activation and expansion
Increased expression of costimulatory molecules (B7-1, B7-2)
Skin Cancer
Past Medical Hx

Past history of skin cancer

- 52% or more will have a second lesion within 5 years
- Look for:
  - Pigmented and Non-Pigmented changes
  - Sores
  - Scars
  - Erythema ab igne (patchy erythema secondary to chronic infrared radiation)
  - Cutaneous horns
Skin Cancer
Diet

Good things

• Cruciferous Vegetables
  • B Carotene
  • Vit A- analogs
  • Vit C
  • Fish
  • LEAN body mass
  • ASA
Skin Cancer Prevention

- Avoid or Block UVA, B
  - Time of day exposure
  - Protective clothing
  - Sunscreen SPF?? 15
    - Use by children decreases lifetime risk by 78%
- Diet high in Beta Carotene
- High Dose isoretinoin DECREASES new lesions in XP pts but no help to BCC or standard population.
RESOURCES

- Your DOCTOR
- YOURSELF 😊
- Cancer.gov
- The Skin Cancer Foundation
- OUR RUN THE SUN
- American Cancer Society
- American Academy of Dermatology
- American College of Surgeons
- American Association of Plastic Surgery
- Many more 😊
KEYS

- Prevent: Stay healthy and aware
- Little Changes = BIG PAY BACK
  - SUN
    - Shade, clothes, big hat, and sunglasses....
    - SunSCREEN - YES, EVERY DAY, SORRY.... **15-30 SPF**
LOOOOOOOOOOKKKKKKKK EVERY WHERE

YEP

1. Examine body front and back in mirror, especially legs.
2. Bend elbows, look carefully at forearms, back of upper arms, and palms.
3. Look at feet, spaces between toes and soles.
4. Examine back of neck and scalp with a hand mirror. Part hair and lift.
5. Finally, check back and buttocks with a hand mirror.

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LOOK EVERYWHERE

YEP
LOOOOOOOOKKKKKK EVERYWHERE
YEP
• GET HELP from a Skin Cancer Provider
• When? Early, if you have a family history
• If you have anything that DOES NOT LOOK RIGHT
• Frequent - YEP
  • IF you have had Skin Cancer: Several Times a Year
  • IF YOU HAVE HAD MELANOMA: 4 x PER YEAR
What happens when WE FIND SOMETHING?

• We evaluate with YOU
• A Biopsy EZ PEEZY; WE ARE NOT EVIL
THEN WHAT?

• Sorry, we wait
• FOR THE PATHOLOGY
Make Sure You UNDERSTAND YOUR PATHOLOGY, GET A COPY

<table>
<thead>
<tr>
<th>Clinical Stage Group</th>
<th>8th Edition</th>
<th>7th Edition</th>
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<td>≥N1</td>
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<tr>
<td>IV</td>
<td>Any T</td>
<td>Any N</td>
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TOGETHER WE DECIDE WHAT TO DO

• How do we treat
• Surgery, little or bigger
• Margins
• Checking lymph nodes
• More scans
• It’s a step-wise process ---- we will walk through it together!!!
What is a margin???

• How much tissue we remove around your cancer to make sure we get it...out...all out.

• Then, we reconstruct.
Margins AND... Sentinel Node Biopsy

Table 1: Guidelines from the NCCN on melanoma surgical margins [13].

<table>
<thead>
<tr>
<th>Tumor thickness</th>
<th>Surgical margin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tis  In situ</td>
<td>0.5-1.0 cm</td>
</tr>
<tr>
<td>T1   ≤1.0 mm</td>
<td>1.0 cm</td>
</tr>
<tr>
<td>T2   1.01-2.0 mm</td>
<td>1.0-2.0 cm</td>
</tr>
<tr>
<td>T3   2.01-4.0 mm</td>
<td>2.0 cm</td>
</tr>
<tr>
<td>T4   &gt;4 mm</td>
<td>2.0 cm</td>
</tr>
</tbody>
</table>
Melanoma Treatment
? Sentinel Node Dissection

• What about < 1.0 MM?
• IU experience:
  • Breslow’s 0.75-1.0 10.2%
  • In other reports rates range form 0 -7.8%
  • There were no + SN in tumors less than 0.6
  • And all + SN were in Clark’s level III or greater lesions
Melanoma Survival
Sub-Clinical Nodal Disease

• SLND Positive 26.6% mortality
• SLND Negative 9.7% mortality
• Sentinel Node dissection has yet to improve over all survival.
• ROLE OF New Drugs
Melanoma Treatment
Sentinel Node Dissection

Our current posture for thin lesions:

- Clarks level III or greater
- Elevated Mitotic Index $\geq 2/\text{mm}^2$
- 0.75-1.0 mm lesions are considered for SLN
Melanoma Survival
Sub-Clinical Nodal Disease
And THEN?????????? Next steps

• Based on all the tests and results
• Your Exam(s), Labs, X-rays, Pathology
• Negative work up?
• Margins, Sentinel Node
• Dermatology for ever - YEP
• Surgeon for awhile, then you can divorce me
• Oncologist, Maybe - WE HAVE GREAT NEW TREATMENTS
Oncology: IMMUNOTHERAPY IT’S REAL & WORKS

![Survival curve diagram](image)

- Recurrence-free Survival (%)
- Time (months)
- Number at Risk

<table>
<thead>
<tr>
<th>Time</th>
<th>Pembrolizumab</th>
<th>Placebo</th>
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<tr>
<td>0</td>
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The FUTURE IS VERY POSITIVE

• New Immunotherapy Drugs YES
• Better tools to help your doctor and you find your cancer early......
• You have to come see us to make this happen.
• IU Health’s investment in the future, coming to IU Simon Cancer Center THIS YEAR
IU Health Helping you Find and Defeat your Cancer
Thank You!

Email: wwooden@iupui.edu
IU Medical Plan Coverage

Skin Cancer

Danielle Abplanalp, CEBS
Manager of Healthcare, IU Human Resources, Benefits
Screening Coverage

- **Preventive** screenings (routine testing for patients without symptoms) with your Primary Care Provider (PCP) as part of your annual wellness visit are covered at 100%

- **Diagnostic** screenings (testing to investigate symptoms or a possible abnormality found during a screening) are subject to cost-share (deductible, coinsurance, out-of-pocket maximum)

**Free Resources - Anthem**
- Case Management – 866-962-1214 or Live Chat
- Cancer Care & Support Resources
Dermatology Telehealth

Anthem’s LiveHealth Online – Dermatology

- $95/visit
- All communication done online via text or email.

- **Step 1:** Log in
- **Step 2:** Describe the reason for your visit and upload any photos of the affected area
- **Step 3:** Receive a diagnosis, treatment plan and prescription, if needed, within 3 business days

Commonly treated conditions:

- Acne
- Athletes foot
- Chronic Hives
- Eczema
- Nail Problems
- Psoriasis
- Rash
- Ring worm
- Rosacea
- Shingles
- Suspicious moles
Using your HSA

- To pay for sunscreen with SPF15 or greater
- To pay for LiveHealth Online Dermatology visit
- To pay for office visits with a dermatologist
- To pay for any prescriptions
IU Cancer Survivor
Community & Support

- Virtual Microsoft Teams Group
- Voluntarily join and participate
- Contact healthyu@indiana.edu to join
Thank You!

Any questions?
Please add them to the Q&A BOX at the bottom of your screen.