Skin Malignancies

Presented by Dr. Douglas Paauw

Disclosure: Dr. Paauw has no significant financial interest in any of the products or manufacturers mentioned.
How Common Is Skin Cancer?

*½ of all White skinned Americans develop a skin cancer by age 65

*Lifetime risk for melanoma

1/60 male

1/80 female
Skin Cancer Statistics - Annual incidence

2.5 million Basal Cell Cancers (BCC)
*700,000 Squamous Cell Cancers (SCC)
• 73,000 invasive Melanomas
• Of people who live to 65 in US, 50% will develop a skin cancer
Risk Factors For Skin Cancer?

* Family history of skin cancer
* History of severe sunburn
* Long term ultraviolet (UV) radiation exposure

Transplant recipients - 250X more likely to develop SCC!!!
Natural History of Melanoma

- Melanomas arise from pre-existing nevi and de novo
  - 26% melanomas histologically associated with pre-existing nevus. Retrospective review.
  - Sun may play role in transformation of nevi

- Prophylactic excision of nevi not beneficial
  - Lifetime incidence of transformation of nevus into melanoma in 20-yr old
    - 1/3,164 men
    - 1/10,800 women
<table>
<thead>
<tr>
<th>Risk Factor For Melanoma</th>
<th>Relative Risk Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Greatly increased</strong></td>
<td></td>
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<tr>
<td>Dysplastic nevi + prior melanoma + familial melanoma</td>
<td>500</td>
</tr>
<tr>
<td>Greater then 10 clinically atypical nevi</td>
<td>12-30</td>
</tr>
<tr>
<td>Prior melanoma</td>
<td>10</td>
</tr>
<tr>
<td>Family history melanoma 1\textsuperscript{st} degree relative</td>
<td>8</td>
</tr>
<tr>
<td>Immunosuppresion or PUVA therapy</td>
<td>2-8</td>
</tr>
<tr>
<td><strong>Moderately increased</strong></td>
<td></td>
</tr>
<tr>
<td>Less than 10 clinically atypical nevi</td>
<td>7</td>
</tr>
<tr>
<td>Chronic tanning or UVA exposure</td>
<td>6</td>
</tr>
<tr>
<td>Greater than 25 moles</td>
<td>2 to 5</td>
</tr>
<tr>
<td><strong>Modestly increased</strong></td>
<td></td>
</tr>
<tr>
<td>Repeat blistering sunburns</td>
<td>2 to 4</td>
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<tr>
<td>Freckling, fair skin, blond or red hair, blue or green eyes</td>
<td>1 to 4</td>
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Pigmented lesions: Decision to Biopsy

- ABCD(E) criteria
- E = Evolving
- Age
- Presence of additional risk factors
- "Ugly Duckling Sign"
Figure. Cutaneous Melanomas

Asymmetry

Border Irregularity

Color Variegation

Diameter > 8 mm
Pigmented lesions: Decision to Biopsy

- **ABCD(E) criteria**
- **E = Evolving**
  - Change in size, shape, color, skin surface, symptoms such as bleeding or itching
- **Age**
- **Presence of additional risk factors**
- **“Ugly Duckling Sign”**
Figure. Cutaneous Melanomas

- Asymmetry
- Border Irregularity
- Color Variegation
- Diameter > 8 mm
Pigmented lesions: Decision to Biopsy

- **ABCD(E) criteria**
- **Age**
  - Changing nevi more likely to be melanomas in patients age 50 and older
  - Number of benign lesions needed to treat to excise one malignant one
    - NNT 83 in young patient
    - NNT 11 in pts > 70 yrs old
- **Presence of additional risk factors**
- **“Ugly Duckling Sign”**
  - A nevus markedly different from all others on a patient
## Summary of Key ABCD(E) Sensitivity and Specificity Studies

<table>
<thead>
<tr>
<th>Criteria Tested</th>
<th>Sensitivity</th>
<th>Specificity</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥ 1 criteria</td>
<td>97%</td>
<td>36%</td>
</tr>
<tr>
<td>All 5 criteria</td>
<td>43%</td>
<td>100%</td>
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</tbody>
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*JAMA. 2004;292:2771-2776*
Seborrheic Keratosis vs. Melanoma
In which patient(s) are you worried about melanoma?

A. 65 yo male. Multiple waxy appearing lesions on face, chest and back

B. 20 yo male. Stuck-on appearing lesion on back. Doesn’t know if it has changed.

C. 55 yo female. Waxy lesion on shoulder. Didn’t resolve after cryotherapy.

D. 45 yo female. Stable, irregularly shaped lesion on abdomen. Keratin pearls noted with hand lens.
Seborrheic Keratosis vs. Melanoma
In which patient(s) are you worried about melanoma?

B. 20 yo male. Stuck-on appearing lesion on back. Doesn’t know if it has changed.

C. 55 yo female. Waxy lesion on shoulder. Didn’t resolve after cryotherapy.
Is it a Seborrheic Keratosis or a Melanoma?

Seborrheic Keratosis
- Associated with aging
  - Usually develop after age 50
  - Rarely occur before age 30
- SK-appearing lesion in younger person requires additional scrutiny
- “Waxy” “Stuck on” appearance
- Might visualize keratin pearls
Is it a Seborrheic Keratosis or a Melanoma?

Melanoma

- SK-appearing lesions that are changing
- SK-appearing lesions resistant to cryotherapy
- Presence of keratin pearls does not rule out melanoma
- 14,000 specimens submitted as SK
  - 0.7-6.4% were melanomas
You are seeing a patient of one of your colleagues in urgent care clinic for management of worsening hyperglycemia. In talking with the patient, you notice a small papule under the left eye, and comment on it. The patient says, “I’ve had that for many years. No one has ever mentioned it before.”
What should you tell the patient about the lesion?

A. It is benign and requires no monitoring
B. It is related to sun exposure and the patient should wear sunscreen
C. It is an atypical nonpigmented mole and should be biopsied
D. It is a concerning lesion that could be cancer and should be biopsied
What should you tell the patient about the lesion?

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Basal Cell CA

- Sites: most commonly sun-exposed areas - face, especially nose, upper trunk, occasionally multiple

- Clinical: four types
  - most common is waxy semi-translucent nodule with a central depression that may ulcerate, crust and bleed; rolled edge
  - telangiectasias course through lesion, extend to normal skin
  - some lesions are pigmented
  - May be morpheaform (scarlike/ hypopigmented) or scaly plaque
Basal Cell CA - 2

- **Course:**
  - chronic, new nodules in region, crusts form and fall off
  - ulceration enlarges and may burrow deeply

- **Prognosis good; low mortality rate; but delayed dx can result in scarring/ deformity. Metastases rare**
Which **ONE** of the following is a Basal Cell Cancer?

A.  
B.  
C.
Which **ONE** of the following is a Basal Cell Cancer?
Nodular Basal Cell. Most common BCC
• Face/neck
• Firm papule
• Well-defined borders
• Telangectasias. “Pearly”

Dermatofibroma
• Legs > arms > trunk
• Ill-defined borders
• “Dimple sign”

Sebaceous gland hyperplasia
• Face
• Soft papule. Yellow-whitish
• Central umbilication
• Lateral compression may extrude sebum
Which ONE of the following is a Basal Cell Cancer?

A. 

B. 

C.
Which **ONE** of the following is a Basal Cell Cancer?
Superficial Basal Cell. 2nd most common
• Generally on trunk
• Not pruritic
• Solitary lesion
• Telangectasias

Nummular eczema
• Extremities
• Pruritic
• Often multiple lesions

Psoriasis
• Extensor surfaces
• Symmetric
• Silvery-white scale
• Guttate type may have no scale
Which **ONE** of the following is a Basal Cell Cancer?

A.  

B.
Which **ONE** of the following is a Basal Cell Cancer?
Morpheaform (Sclerosing) BCC
- NO history of trauma
- Face/neck
- Ill-defined borders
- Induration may extend beyond visible margin.

Hypertrophic Scar
- History of trauma
- Raised
- Confined to wound margin
Squamous Cell Carcinoma

• 2nd most common skin cancer
• Most common skin cancer in dark-skinned pts
• Risks
  - Sun exposure (cumulative)
  - HPV
  - Non-healing wounds
  - Immunosuppression (especially transplants)
  - Ionizing radiation
  - Smoking
Actinic Keratosis
Squamous Cell Carcinoma

- **Actinic keratosis**
  - Predisposing lesion in up to 60% of SCC
  - Less than 1% will likely progress to SCC within a year
  - 2.6% may progress to SCC by 4 years

- **Location**
  - Sun exposed areas
  - Ano-genital or digits if HPV related

- **2-6 % risk of metastasis**
  - Highest risk if near mucosal surfaces or ears
Actinic Keratosis/SCC:
Diagnostic & Treatment Options

**Cryotherapy**
- If small number or size of lesions
- May cause hyper/hypo pigmentation
- Simple office procedure

**Surgical excision**
- If thick, larger lesions
- Submit for pathology

**Field Therapy**
- Recurrent or multiple lesions
- Topical 5-FU or imiquimod
This patient presents with the following lesion which has grown over three months from a small papule to 1.5cm. *What is the diagnosis?*
What is the diagnosis?

A. Atypical melanoma
B. Squamous cell carcinoma
C. Merkel cell carcinoma
D. Human papilloma virus
E. Benign dermatofibroma
What is the diagnosis?

A. Atypical melanoma
B. Squamous cell carcinoma
C. Merkel cell carcinoma
D. Human papilloma virus
E. Benign dermatofibroma
MERKEL CELL CARCINOMA

Merkel cell carcinoma (MCC)

- Rare (~1500 cases per year, most age 50+)
- Caused by a virus
- Can occur anywhere, sun-exposed sites common
  - Skin, mouth, genitals; ~50% head and neck, eyelids common
  - May occur in immunosuppressed pts, HIV, CA, (~8%)
  - Asymptomatic, painless
- Initially looks like pimple, bite or cyst → very aggressive
- Prognosis good if localized.
Which biopsy would you recommend?

A. 6 mm punch
B. Elliptical excision with 4 mm margins
C. Shave biopsy
D. Elliptical excision with 2 mm margins
E. 4 mm punch of the darkest/raised area

5.5 mm x 5 mm raised lesion
Which biopsy would you recommend?

A. 6 mm punch
B. Elliptical excision with 4 mm margins
C. Shave biopsy
D. Elliptical excision with 2 mm margins
E. 4 mm punch of the darkest/raised area
Pigmented lesions: How much of the lesion should I get?

Complete removal of pigmented lesion

- Subtotal excisions may underestimate prognosis
  - Second total excision resulted in worse prognosis in 20% of pts
    - 10% would have qualified for sentinel lymph node biopsy

Aim for 1-3 mm margins

- No advantage to cutting out wider margins with initial excision
  - Decreased recurrence rate in patients with surgical margins taken out with second excision.
Obtaining Adequate Biopsy Specimen

- Prognosis based on depth in melanoma
- Specimens should extend to subcutaneous fat
  - Punch or excisional biopsies recommended
  - Shave biopsy: higher risk of transecting lesion
- Partial biopsy
  - May be adequate for diagnosis of BCC or SCC
  - Always include margin of lesion
You completed a 6 mm punch biopsy on a different patient

What is your next step?

A. Close with nylon suture
B. Hemostasis with gel foam
C. Close with rapidly absorbing vicryl suture
D. Any of the above
You completed a 6 mm punch biopsy on a different patient.

What is your next step?

A. Close with nylon suture
B. Hemostasis with gel foam
C. Close with rapidly absorbing vicryl suture
D. Any of the above
To suture or not to suture?

Does this biopsy need a stitch?
RCT comparing primary (suture) vs secondary healing with gel foam in 4mm and 8 mm punch biopsies
- **Doctors:** No difference in healing or cosmesis
- **Patients:** Better cosmesis w/ suture in 8 mm bx

Sutures
- Monofilament nylon (Ethilon®, Dermalon®)
- Polypropylene (Prolene®)

What about absorbable sutures?
- Polyglactin 910 (Vicryl®) fast absorbing
  - equal to nylon sutures in infection, redness, dehiscence, scar, hypertrophy, pt satisfaction
Should I use a topical antibiotic?

- Not necessary
- No difference in infection rates
  - RCT. 922 pts. Bacitracin vs. petroleum jelly
- Risk of allergic contact dermatitis (ACD)
  - 1% ACD in bacitracin group
  - 0% in petroleum jelly group
- Common contact allergens
  - Neomycin: 3rd most common in U.S.
  - Bacitracin: 7th most common in U.S.
Case

- This patient has two worrisome lesions located on her face and neck
- Next available appointment in dermatology clinic is 6 months away
- You plan to do the biopsy yourself
- Pick the THREE areas that are “biopsy danger zones.”
Biopsy Danger Zones

- Areas overlying highly vascular structures
- Areas associated with exit points of superficial motor nerves
- Nerves & vessels run in the subcutaneous fat plane
  - Punch biopsy can be safely performed if stopped at interface of dermis & subcutaneous fat.

Temporal branch of facial nerve
Exit point marginal mandibular nerve
Exit point spinal accessory nerve
Pathology Forms

- PCPs terrible about filling out pathology forms
- Review of submitted pathology specimens
  - PCPs:
    - 15% no clinical history
    - 90% had no clinical diagnosis
  - Dermatologists:
    - 0.7% no clinical history
    - 31% had no clinical diagnosis
- Clinical history influences pathologist interpretation
The 6 Essential D’s

**Demographics:** age, gender, ethnicity

**Description:**
- location, color, symptoms, other areas of involvement, previous therapy or biopsy

**Diseases & Drugs**

**Duration of condition**

**Diameter of lesion or eruption**

**Diagnosis:** In order of likelihood
- Can be broad categories such as malignancy, dermatitis,
  - Avoid terms like “rule out”
Interpretation of Pathology Report

Variability in nomenclature
- Only 1/4 of dermatopathologists adhere to 1992 consensus guidelines of nomenclature for atypical nevi

Variability in interpretation
- Term “dysplastic” or “atypical nevi” varies in concern among pathologists

Open communication
- Working relationship with YOUR dermatopathologist imperative to determine clinical follow-up
- Recommend 2nd opinion if histology does not match clinical suspicion
- Confer with dermatologists
A 58 yo man is seen for a new raised pigmented lesion on his arm. An elliptical bx is done and 2 sutures are placed. What advice do you give him?

A) Keep the sutured wound dry for 3 days
B) Keep the sutured wound dry for 6 days
C) No need to keep the wound dry
Is it OK For Sutures To Get Wet?

- Comparison trial of keeping sutured wounds dry and covered vs allowing them to get wet and be uncovered.
- 857 patients following minor skin excisions randomised to either keep their wound dry and covered (n = 442) or remove the dressing and wet the wound (n = 415).
- The incidence of infection in the intervention group (8.4%) was not inferior to the incidence in the control group (8.9%) (P < 0.05)

BMJ 2006;332:1053
Review
Key Points

- Immunosuppression huge risk for skin cancer (Sq cell and BCC)
- Know your ABC’s (and DE)
- Cryotherapy good option for small #’s of AK’s, topical 5FU for large numbers