

It's Not Just a Base Tan

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- University of Florida, College of Medicine – 2008
- SDPA President Elect, 2024-2025
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Presentation Overview

- Sun and UV radiation
- Actinic Keratosis (AK)
- Basal Cell Carcinoma (BCC)
- Squamous Cell Carcinoma (SCC)
- Malignant Melanoma (MM)
- Mammary Pagets
- CTCL

Skin Cancer Facts

- **1 in 5 Americans** will develop skin cancer by the age of 70.
- **More than 2 people** die of skin cancer in the U.S. every hour.
- Having **5 or more sunburns** doubles your risk for melanoma.
- When detected early, the **5-year survival rate for melanoma is 99 percent.**
- **Tanning bed use increases risk of Melanoma almost 50%.**
- Per NIH Estimated ~100K Melanoma found in 2022, death rate 7,650

UV Radiation

- UVA – comprises 3.5% of radiation
- UVB – comprises 96.5% of radiation
- UVC – doesn't reach Earth's surface

UV Effects on Skin

- Sun Burn
- DNA damage
- Photoaging
- Pigment Disorders
- Skin Cancer

UVA vs UVB

- UVA (96.5% of radiation)
 - 320-400 nm
 - NOT absorbed by Ozone
 - Penetrates glass
 - Penetrates to Dermis
 - Aging rays
- UVB (3.5% of radiation)
 - 290-320 nm
 - Partially absorbed by Ozone
 - No glass penetration
 - Penetrates to Epidermis
 - Sunburn rays

Sunburns

- Prevention!
- Skin type determines susceptibility
- Even sun exposure without burn increases skin cancer risk
- UV index
- Any pink = sunburn
- Repeated sunburns increase risk
- Even one blistering sunburn in childhood doubles melanoma risk



Sun Protection

Avoid tanning beds and sun exposure 10 AM-2 PM

Protect

- UPF Clothing
 - (wide brim) hats
 - Rash guards
 - (Polarized) sunglasses
- SPF
 - 30+
 - Mineral vs Chemical
 - Regular reapplication (80 - 90 minutes)
- Polypodium leucotomos fern (PLE)
- Post-factory auto window films

Dermoscopy

- Noninvasive exam of the skin surface
- Enables visualization of submacroscopic structures invisible to naked eye
- High resolution and magnification of lesion 10-16x
- Pigmented and nonpigmented lesions



Shave Biopsy

- **Materials required:** alcohol prep swab, local anesthetic (xylocaine with epi), drysol, cotton tipped applicator, Vaseline, bandage, stainless steel blade
- **Cleanse** the area with alcohol prep swab
- **Inject** local anesthetic
- **Remove** the entire lesion by applying pressure to the ends of the blade to bend the blade and using a **back-and-forth sawing motion** to remove the lesion from the skin, you need at least **pin-point** bleeding to ensure the correct depth
- **Apply drysol** to the wound for bleeding
- Place specimen in formalin bottle for pathology
- Always **double-check** that specimen is in bottle!!!
- Always **send** anything removed for pathology



Punch Biopsy

- **Materials required:** alcohol prep swab, local anesthetic (xylocaine with epi), gauze, topical surgical prep swab, gloves, punch biopsy tool (2-8mm in size) forceps, scissors, needle holder, formalin, sutures, Vaseline, bandage, stainless steel blade
- **Cleanse** the area with alcohol prep swab
- **Inject** local anesthetic
- **Clean** with surgical prep in concentric rings
- **Stretch the skin** perpendicular to the relaxed skin tension lines, **punch** instrument inserted into skin while **rotating** down to the subcutaneous fat. Use forceps to **gently grab** the specimen at the subcutaneous fat, and **cut** the specimen at the fat with curved sharp scissors.
- **Suture** with interrupted sutures
- **Place** specimen in formalin bottle for pathology
- Always **double-check** that specimen is in bottle
- Always **send** anything removed in for pathology



DermNetNZ.org

Actinic Keratosis (AK)



<https://dermnetnz.org/topics/actinic-keratosis-face-images>

<https://dermnetnz.org/topics/actinic-keratosis-scalp-images>

Actinic Keratosis (AK)

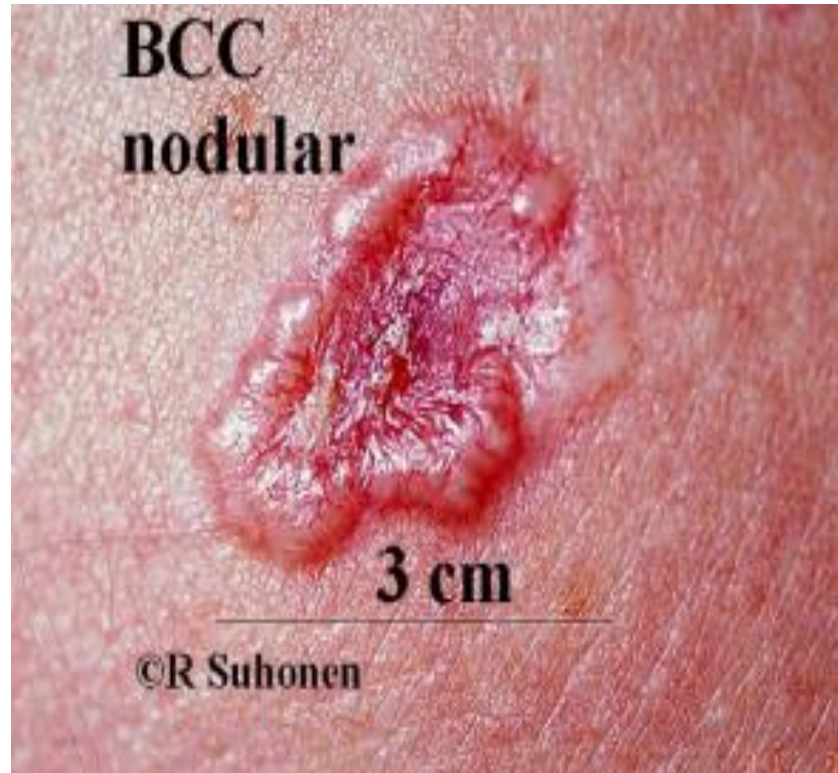
- Scaly, rough patches
- Potential to evolve into skin cancer
- Increased risk with each exposure, burn, altitude
- Occur on sun damaged skin
 - Scalp, face, ears, hands, arms

AK Treatment

- Cryosurgery (Ln2)
 - -196 C (-320.8 F)
- PDT (Blue light)
- Field Therapy:
 - 5-FU (Efudex)
 - Imiquimod
 - Tirbanibulin
 - Efudex/Calcipotriene



Basal Cell Carcinoma (BCC)



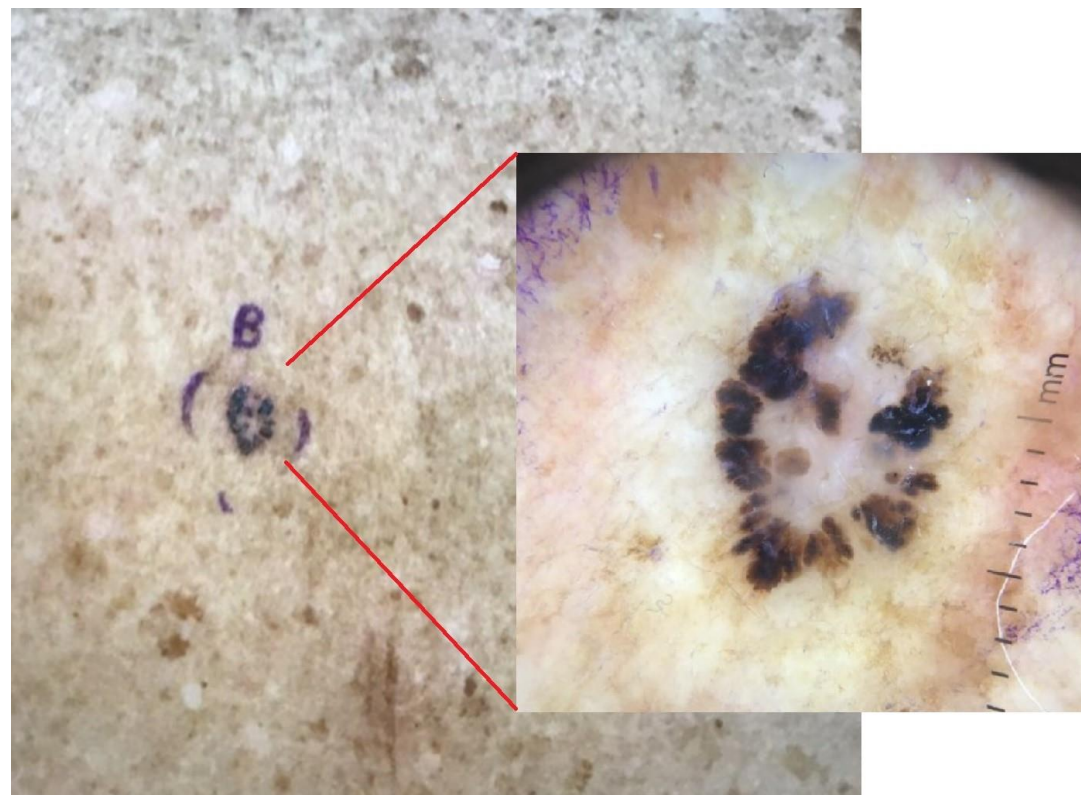
<https://dermnetnz.org/topics/basal-cell-carcinoma-affecting-the-face-images>

Basal Cell Carcinoma (BCC)



<https://dermnetnz.org/topics/basal-cell-carcinoma-affecting-the-face-images>

Basal Cell Carcinoma (BCC)



Basal Cell Carcinoma (BCC)



Basal Cell Carcinoma

- Most common skin cancer Incidence xxx
- Slow growing, rarely metastitizes
- Can destroy tissue if not treated
- Types: Superficial, Nodular, Pigmented, Morpheaform

Squamous Cell Carcinoma (SCC)



<https://dermnetnz.org/topics/squamous-cell-carcinoma-of-the-ear-images>

<https://dermnetnz.org/topics/squamous-cell-carcinoma-on-the-face-images>

Squamous Cell Carcinoma (SCC)



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Squamous Cell Carcinoma (SCC)



Squamous Cell Carcinoma (SCC)



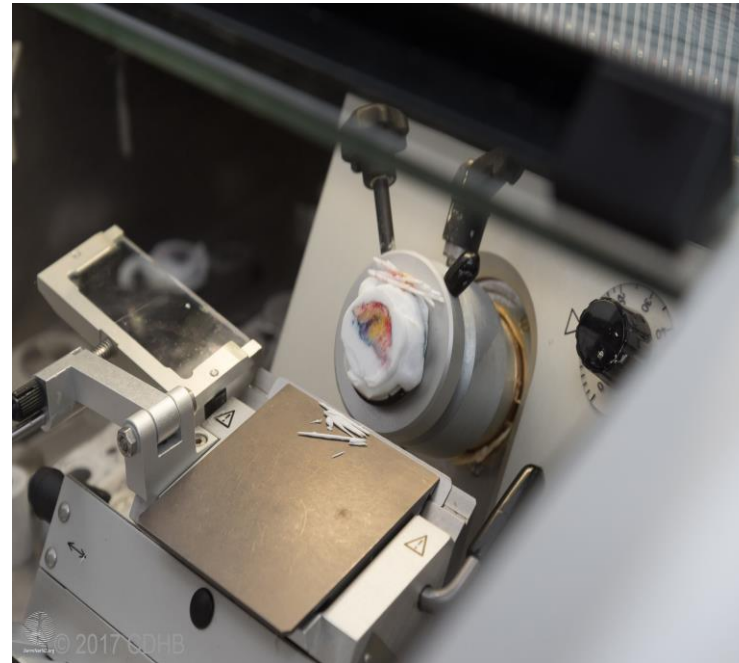
SCC

- 2nd most common skin cancer incidence
- Caused from UV radiation/exposure
- Can arise from Aks
- Types: Superficial/In situ, Keratoacanthoma, Invasive
- Increased risk in transplant and immunosuppressed patients

BCC & SCC Treatment

- Topical: 5-FU (Efudex), Imiquimod
- Electrodesiccation and Curettage (ED&C)
- Excision with margin
- SRT
- Mohs Surgery: scalp, face, ears, hands, genitals, body (>2 cm)
- Hedge hog pathway inhibitors (many BCC or BCC large to treat)

Mohs Surgery



https://dermnetnz.org/assets/Uploads/Mohs-excision-of-tumour__WatermarkedWyJXYXRlcm1hcmtlZCJd.jpg

https://dermnetnz.org/assets/Uploads/4-Mohs-cutting-frozen-sections3__WatermarkedWyJXYXRlcm1hcmtlZCJd.jpg

https://dermnetnz.org/assets/Uploads/Mohs-HE-staining__WatermarkedWyJXYXRlcm1hcmtlZCJd.jpg

Melanoma

- Most fatal skin cancer ; ~7,500 die annually in US
- Men > Women
 - In 2023, expected ~100k cases (60K men, 40k women)
 - In 2023, expected ~8K deaths (5,500 men, 2,500 women)
- Men: back ; Women: legs
- Risk doubles if:
 - Five or more sunburns in lifetime
 - Repeat tanning bed exposure
- Increased risk: fair skin, light or red hair, numerous moles, previous MM, advanced age, family history
- Types: Superficial Spreading/In Situ, Invasive, Amelanotic

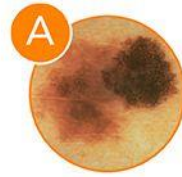
ABCDEs of Melanoma

BE A HERO!

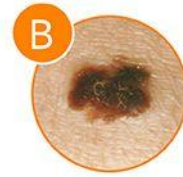
CATCH SUSPICIOUS SPOTS

Use the ABCDEs of melanoma.

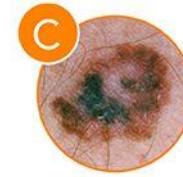
Melanoma is the deadliest form of skin cancer. However, when detected early, it can be effectively treated. Look for the following warning signs of melanoma when performing skin exams:



A
ASYMMETRY
One half is unlike the other half.



B
BORDER
Irregular, scalloped or poorly defined border.



C
COLOR
Varied from one area to another; has shades of tan, brown or black; sometimes white, red, or blue.



D
DIAMETER
While melanomas are typically greater than 6mm (the size of a pencil eraser) when diagnosed, they can be smaller.



E
EVOLVING
A mole or skin lesion that looks different from the rest or is changing in size, shape or color.
Example:



Malignant Melanoma



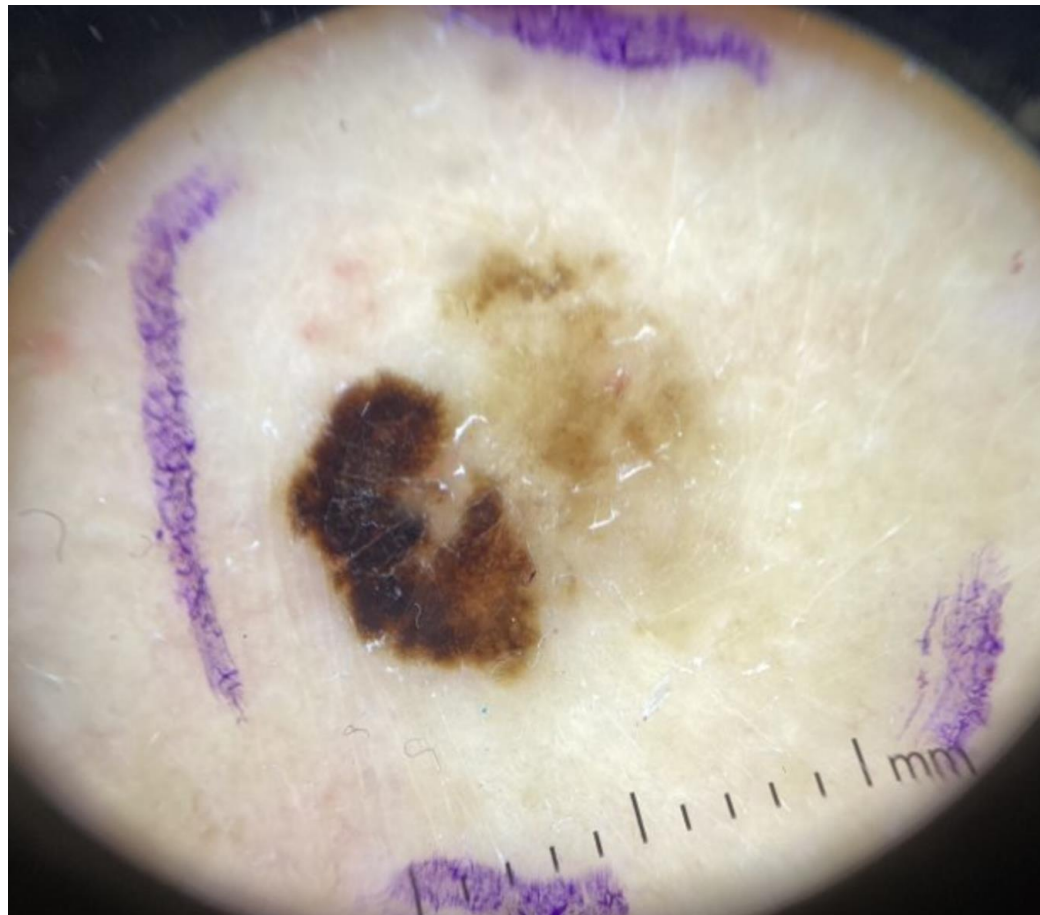
<https://dermnetnz.org/topics/superficial-spreading-melanoma-images>

Malignant Melanoma



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Malignant Melanoma



Malignant Melanoma



Melanoma



<https://dermnetnz.org/topics/superficial-spreading-melanoma-images>

Amelanotic Melanoma



<https://dermnetnz.org/images/amelanotic-melanoma-images>

Melanoma Treatment

- Referral to dermatologist, med oncologist, surgical oncologist for treatment
- Excision
- Sentinel lymph node biopsy
- Chemotherapy/immunotherapy
 - BRAF inhibitors
- Q3 month FBE x 1 year, Q6 month FBE x 2 years minimum, then yearly

Mammary Pagets

- Malignant intraepithelial condition of nipple and peri-areolar skin
- Protracted inflammatory appearance
 - Erythema, scaling, weeping, bleeding
- Mostly women
- 1-4% of all breast cancers
- Punch biopsy and refer to surgical and breast oncology



CTCL



<https://dermnetnz.org/topics/cutaneous-t-cell-lymphoma-images>

CTCL: Overview

- T or B-cell origin
 - MF and Sezary syndrome most common
 - Vary in presentation
- Erythematous patches and plaques with fine scale, 2-20 cm
- “cigarette paper appearance” or bizarrely shaped plaques
- Often found on buttocks and sun-protected areas of trunk and limbs
- May be severely pruritic
- Delay to diagnosis (6-8 biopsy average)
 - Broad shave biopsy
- Frequently previously diagnosed as psoriasis, AD, Tinea, ACD

CTCL: Overview (cont)

- Mostly 50+ yo, but can occur at any age, M>F
- African descent > Northern European

- Treatment: Refer to Derm-Onc

Do you want to get into Dermatology?

- Join SDPA, SDNP, and state dermatology society
- AAPAs PA Like A Pro Webinar: Dermatology
- AAPA Huddle. Ask Me: Dermatology

<https://huddle.aapa.org/communities/community-home/digestviewer/viewthread?MessageKey=5e5d87bb-dcb4-4627-9da2-62ee77103391&CommunityKey=e54b07fe-0e40-4c0c-a8e4-25d744d979b5#bm5e5d87bb-dcb4-4627-9da2-62ee77103391>

Q & A