Basal Cell and Squamous Cell Carcinoma

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Basal and squamous cell carcinoma

Definition

• The most common types of skin cancer
  • Excluding melanoma, they make up 95% of skin cancers
• Called “non-melanoma skin cancer”
• Both grow from the outermost layer of the skin, the epidermis
• BCC = basal cell carcinoma
• SCC = squamous cell carcinoma
Skin cancer

- Squamous cell carcinoma
- Basal cell carcinoma
- Melanoma
Skin cancer

UV light exposure

Damage to DNA in skin cells

Growing cells develop mutations

Cells become malignant (cancer)
Who gets skin cancer?

- Fair skin
  - Caucasians have 70 times greater risk
- Burns easily
- History of lots of sun exposure
- Tanning booth use
  - 2.5x greater squamous cell carcinoma
  - 1.5x greater basal cell carcinoma
Who gets skin cancer?

- Older age
- Immunosuppressed
  - Solid organ transplant (kidney, heart, etc)
  - HIV
- Men > women
Basal cell carcinoma

- Most common cancer
- Most common skin cancer in Caucasians
- Over 1 million in the US each year
- Caused by both chronic sun exposure and brief intense sun exposure
Basal cell carcinoma

- Seen in mid-age to elderly
- Slow growing over months to years
- May ulcerate or bleed
- Locations: face, ears, neck, trunk, extremities
- Metastatic disease extremely rare (less than 0.1%)
- May invade locally to fat, muscle, bone
Basal cell skin cancer

**Nodular type** – most common
- Pearly or shiny growth
- May look like a pimple
- Bleeds, scabs, crusts easily
- Area that does not heal
Nodular BCC
Superficial BCC

- Thin BCC in top layer of skin (epidermis)
- Scaly pink or red area
- May bleed or scab
- May be mistaken for dry skin or a rash
Superficial BCC
Infiltrative / Morpheaform BCC

- can look like a scar or white area

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Infiltrative BCC
Squamous cell carcinoma

- Second most common skin cancer
- Most common skin cancer in African Americans
- About 250,000 each year in the US
- Caused by chronic sun exposure
- Can rarely spread within the body (metastasize)
Squamous cell carcinoma

• Usually slow growing lesions, but some can grow rapidly
• If large → may bleed, ulcerate, be painful
• Usually look **pink or red and scaly**
  – Genital or finger lesions may look more warty
Squamous cell skin cancer

- Pink / red growth
- Often scaly
- May bleed, scab, crust
- Area that does not heal
Squamous cell carcinoma
Squamous cell carcinoma
Squamous cell carcinoma
SCC in situ

- Thin tumor
- Only within the top layer of skin (epidermis)
- May look like scaly or dry patch of skin
- May bleed or crust
Precancerous growths: Actinic keratoses

- Pink, rough, scaly areas
- Usually on face, ears, hands
- Precancerous areas from sun damage
- Can develop into squamous cell skin cancers
- May improve or resolve with sun protection
Lots of actinic keratoses on a man’s hand

Actinic keratoses (Aks) are precancerous. They may develop into SCCs.
Prevention

- Minimize ultraviolet (UV) damage
  - Sun avoidance during peak UV hours
  - Sun protective clothing and hats
  - Sunscreen

- See your primary care or dermatologist
  - Treatment of precancerous growths (AKs) can decrease rates of squamous cell cancer formation
Detecting skin cancer

- Look at your skin (or your loved one’s) head to toe once a month
  - Look everywhere!!
- Basal cell and Squamous cell cancers seen commonly:
  - Head and neck (face, scalp, eyelid, ears, lips)
  - Hands (squamous)
  - Chest, back
  - Legs
How do we diagnose NMSC?

- **Appearance**
- **Symptoms**
  - Bleeding, crusting, itch, pain
- **Failure to respond prior treatment**
  - Example: lesion thought to be fungal infection did not respond to antifungal cream
- **Biopsy**
  - Definitive way to diagnose
  - See your primary care doctor or dermatologist
Treating skin cancer

- Early detection
Treatment for BCC and SCC

- Topical creams – good for thin tumors only
  - Imiquimod
  - Fluorouracil
- Lasers
- Cryotherapy – “freezing”
Electrocoagulation and curettage

- “scraping and burning” tumor until reach a healthy base

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Surgical Excision

- Cutting around the tumor and placing stitches
- 3-5 mm “safety” margin
Mohs Micrographic Surgery

- Cancer is surgically removed in stages using narrow safety margin
- All edges of tissue checked
- Cancers in critical areas (face, hands, genitals)
- Keeps wound as small as possible
- Highest cure rate 98-99%
Genetics and Basal cell carcinoma

- Gene mutations have been found in BCC
  - PTCH gene
  - p53 gene

- Gorlin syndrome (Nevoid BCC syndrome)
  - genetic disorder
  - Mutation in PTCH gene
  - >50% develop multiple BCCs (can have hundreds)
Gorlin Syndrome

- Multiple basal cell carcinomas
Genetics and treatment

- **GDC-0449**
  - Drug in clinical trials
  - Works on the PTCH pathway
  - May be useful especially for those with genetic syndromes, numerous or inoperable BCCs
The End