Protecting your Skin after Transplant

Celebrating a Second Chance at Life Survivorship Symposium

May 3-9, 2025

Rachel Rosenstein, MD, PhD
Hackensack University Medical Center

Protecting Your Skin after Transplant

Rachel Rosenstein, MD, PhD
Assistant Professor, Dermatology
Hackensack Meridian Health John Theurer Cancer Center

Learning Objectives

Following this presentation, attendees will have an understanding of:

1. Malignant and non-malignant skin problems that can develop after a hematopoietic cell transplant (HCT) in the short- and long-term
2. Who's at risk for developing non-malignant skin problems after HCT
3. Who's at risk for developing malignant skin problems after HCT
4. Recommended skin care and sun protection after HCT
5. Tests, and frequency of same, that HCT recipients should have for early detection of malignant and non-malignant skin problems

Protecting Your Skin after Transplant

- Skin problems are common after transplantation
- Although many of these problems can develop in people with intact immune systems, they often occur more frequently in transplant patients
- Transplant patients benefit from regular skin exams

Treatment of Dry Skin: Use Moisturizer Twice Daily

- Ointments:
  - More occlusive, cause less burning and stinging
  - Greasiness may not be acceptable
- Creams:
  - Faster absorption, less occlusive, thick
- Lotions:
  - Higher water content, thinner
  - Can apply under occlusion
- Avoid allergy-provoking ingredients
  - Perfumes, lanolin, herbal extracts
  - “unscented” vs “fragrance free” or “free and clear”

Bolognia, JL. Dermatology text

Basic Skin Care

- Mild cleansers
  - Focus on soiled and sweat gland-containing areas
- Avoid bubble baths and scented salts or oils
- Lukewarm bath/shower (not hot)
  - No more than once daily, 10-15 minutes
  - Pat dry, do not rub roughly
- Application of a moisturizer within 3 minutes of exiting bath
- If treatment with a topical steroid is needed, apply immediately after bath (then moisturizer)
- Try not to scratch (can worsen itching)

Rashes after Transplant

Infections: Bacterial

- Source may be blood or skin
- Diagnosis:
  - Clinical
  - Culture
  - Biopsy
- Treatment:
  - Topical
  - Oral
  - IV antibiotics

Bolognia, JL. Dermatology text

Infections: Viral

- Herpesvirus family
  - Herpes simplex
  - Varicella zoster
- Transmission:
  - often reactivation, skin-to-skin
- Diagnosis:
  - scraping
- Treatment:
  - antiviral (oral or IV)

Rosenstein, RK, Baliga, R. 2016.
Bolognia, JL. Dermatology text

Infections: Viral-Induced Benign Skin Lesions

- Molluscum contagiosum
  - Transmission: Skin-to skin contact
  - Treatment: cryotherapy, curettage, application of topicals
- Verruca vulgaris – warts
  - HPV infection
  - Transmission: Reactivation
  - Treatment: decrease in immunosuppression, cryotherapy, paring, topicals

Rosenstein, RK, Baliga, R. 2016.

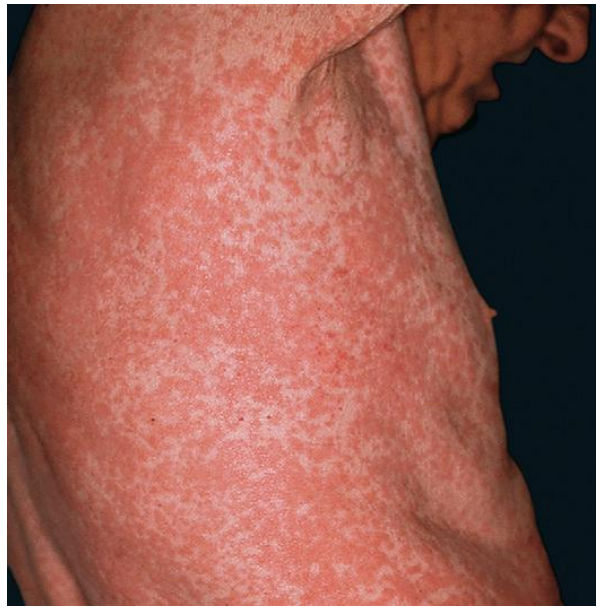
Infections: Fungal

- Dermatophytes, *Malassezia, Candida*
- Other opportunistic infections
- Diagnosis:
  - Scraping, culture, biopsy
- Treatment:
  - Topical anti-fungal cream or shampoo
  - Systemic antifungals
  - Surgery
  - Debridement

Rosenstein, RK, Baliga, R. 2016.
Bolognia, JL. Dermatology text

Drug Rashes

- Morbilliform drug rashes
  - Days-weeks after starting
  - Can look similar to viral or GVHD rashes
- Severe drug rashes:
  - Stevens Johnson Syndrome
  - Toxic Epidermal Necrolysis
- Keep a drug diary



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Bolognia, JL. Dermatology text

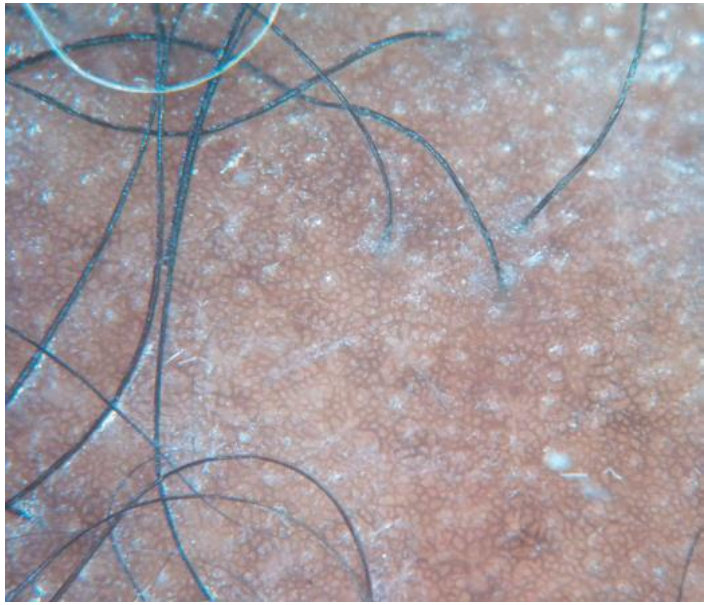
Non-Scarring Hair Loss

- Non-scarring hair loss
- Chemotherapy and radiation, stressors
  - 2-4 weeks after starting
  - Usually reversible
  - Minimize trauma
  - Protect from sun
- Pattern hair loss
- Treatments: minoxidil, 5-α–reductase inhibitors

Bolognia, JL. Dermatology text. Huang, JT, et al. JAAD. 2018.

Scarring Hair loss

- GVHD, infection
- Treat early to prevent further scarring



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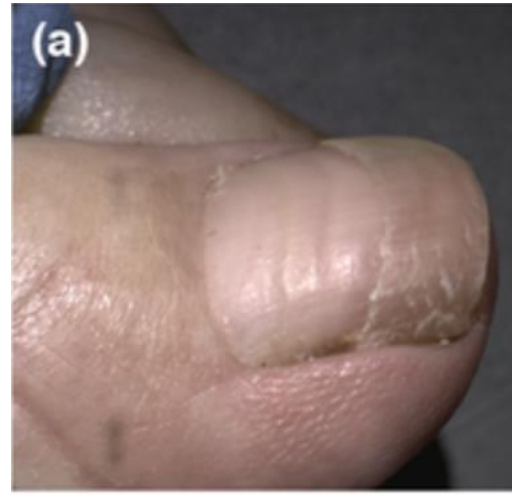
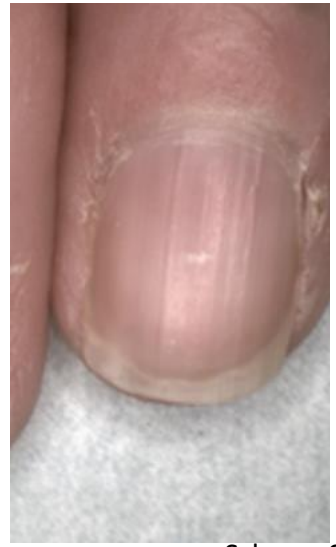
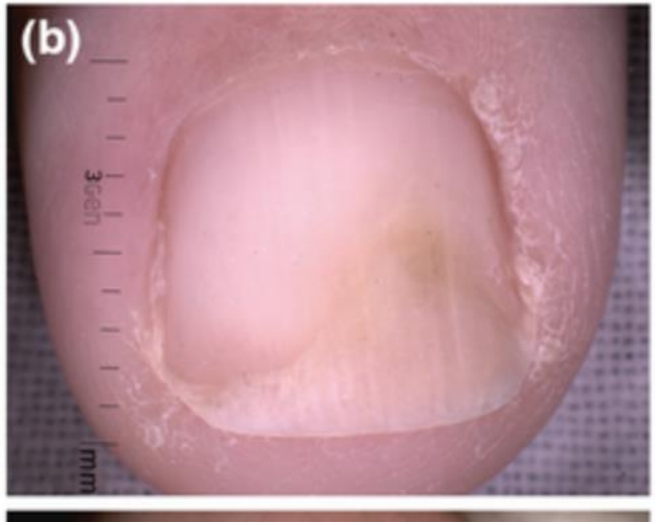
Nail changes

- Present in 17-63% cGVHD patients
- No correlation with overall cGVHD severity
- Higher incidence with longer GVHD duration
- Rule out nail infection
- Rule out nutritional deficiency
- Avoid irritants, + moisturizers/ strengtheners





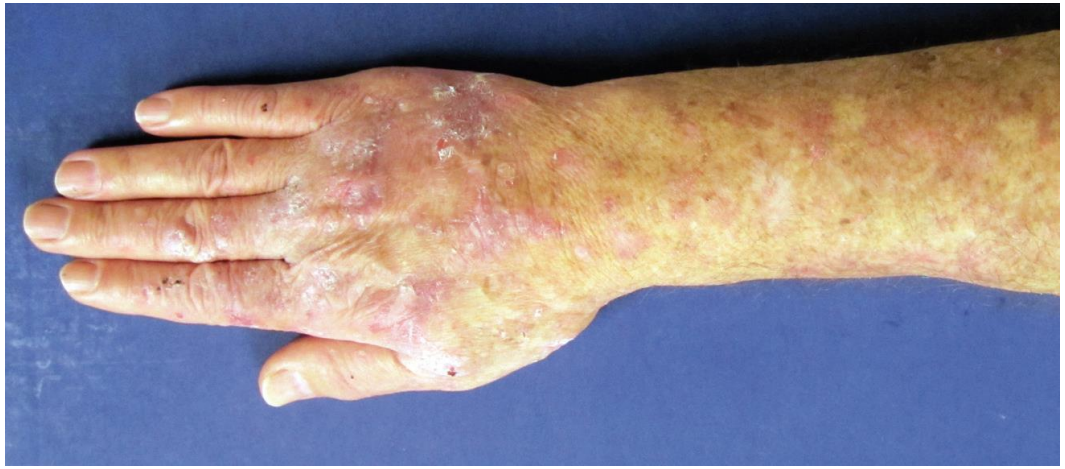


Szlauer-Stefanska, A, et al. JEADV. 2018.
Sanli, H, et al. IJD. 2004

Skin Lesions after Transplant

Actinic (Solar) Keratoses

- Potentially pre-cancerous
- Atypical keratinocytes, most often induced by sun damage
- Can develop into invasive squamous cell carcinomas
- Appears as rough, scaly spots, often pink
- Often on the face, neck, tops of hands, forearms, scalp
- Can involve the lips (actinic cheilitis)



Rosenstein, RK, Baliga, R. 2016.

Treatment of Actinic (Solar) Keratoses

- Individual treatment of lesions
- When there are too many to treat individually:
  - “Field therapy”
  - Topical chemotherapy (5 Fluorouracil cream)
  - Chemical peels
  - Photodynamic therapy
- Controls the skin damage but repeat treatments are often necessary

Bolognia, JL. Dermatology text

Malignant Skin Problems

- Allogeneic HCT recipients are at an increased risk for skin cancer
- 2.6% HCT recipients
- Non-melanoma skin cancers:
- **Squamous cell carcinoma (15.4%), basal cell carcinoma (69.2%)**, Kaposi's sarcoma, Merkel cell carcinoma
- Melanoma (15.4%)

Omland, SH. JAMA Derm. 2016.

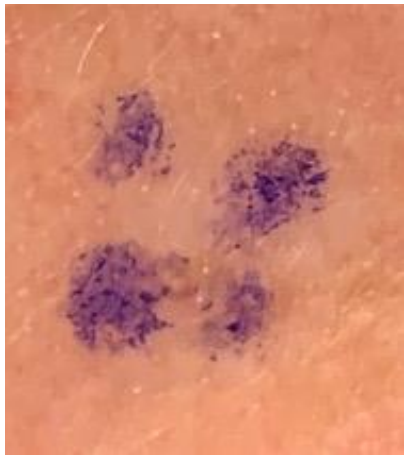
Basal Cell Carcinoma

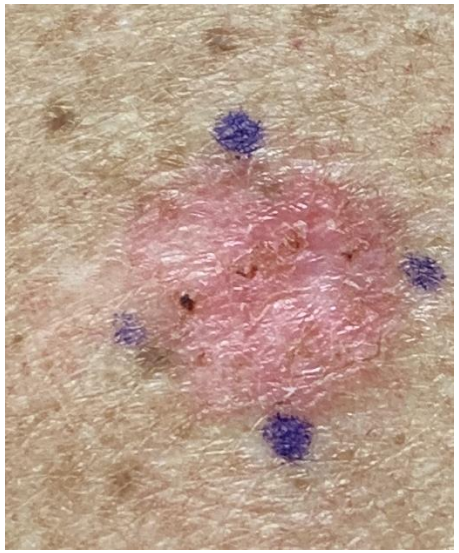
- Most common skin cancer
- Usually localized (rarely metastasizes)
- Can be more aggressive depending on specific features or the patient's immunosuppression

Rosenstein, RK, Baliga, R. 2016.

Basal Cell Carcinoma: What it Looks Like

- Pink, pearly bumps
- Red, scaly bumps
- Lesion that bleeds easily
- Scar-like



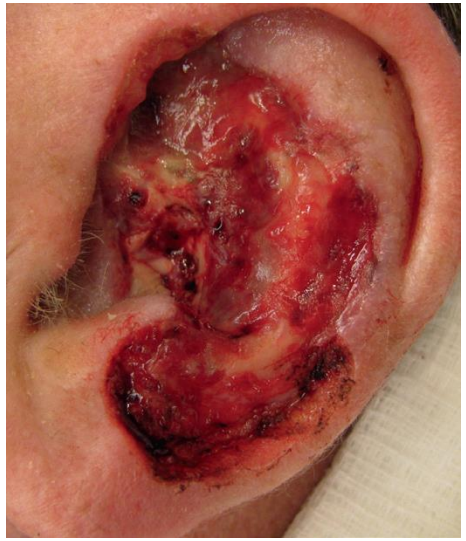


Basal Cell Carcinoma: How it Can Evolve

- Typically, slow growing
- Can become large
- May ulcerate (open up)
- Can become locally destructive

Basal Cell Carcinoma Treatment

- Diagnosis: skin biopsy
- Treatment depends on pathologic features of the basal cell, location, size
- Destructive methods
  - Electrodessication and curettage
  - Cryotherapy
  - 5-fluoruracil
  - Radiation
- Surgery
  - Excision
  - Mohs micrographic surgery



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Squamous Cell Carcinoma

- Scaly, pink bump
- May cause pain, ulcerate, bleed crust
- Dome-shaped crater-like bumps
- Greater potential to recur, invade, or metastasize

Squamous Cell Carcinoma

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Squamous Cell Carcinoma Treatment

- Diagnosis: skin biopsy
- Treatment depends on pathologic features, location, size
- Destructive methods
  - Electrodessication and curettage
  - Cryotherapy
  - 5-fluoruracil
  - Radiation
- Surgery
  - Excision
  - Mohs micrographic surgery
- May require imaging or lymph node biopsy

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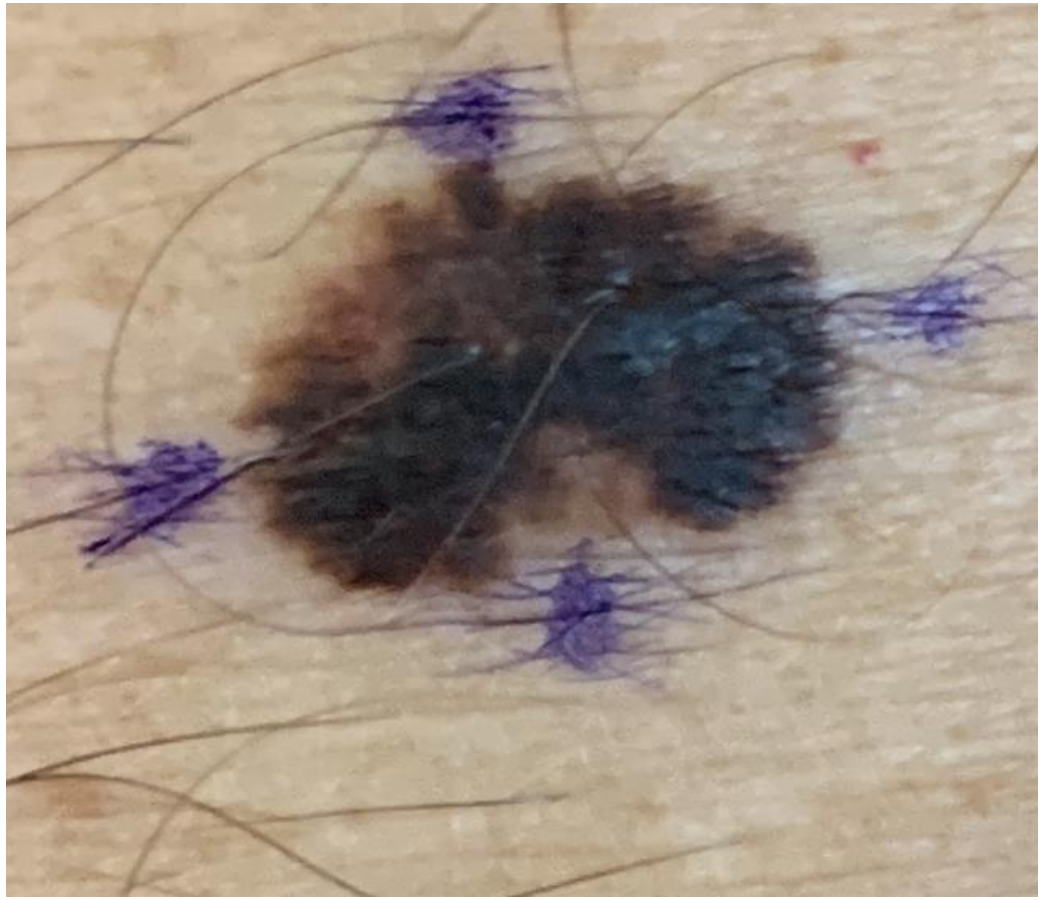
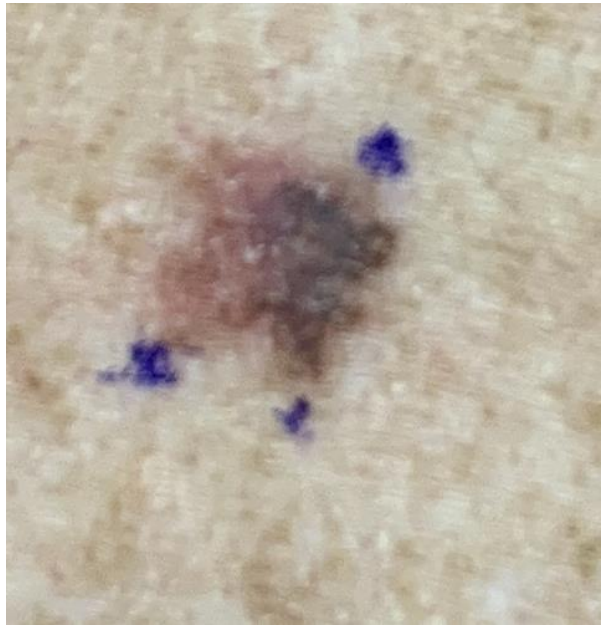
Melanoma

- Asymmetry
- Border
- Color
- Diameter
- Evolution



Melanoma

- Dark brown-black
- Can be pink



Melanoma Treatment

- Diagnosis: skin biopsy or excisional biopsy
- Treatment:
  - Excision
  - May require imaging or lymph node biopsy
  - May require additional systemic therapy

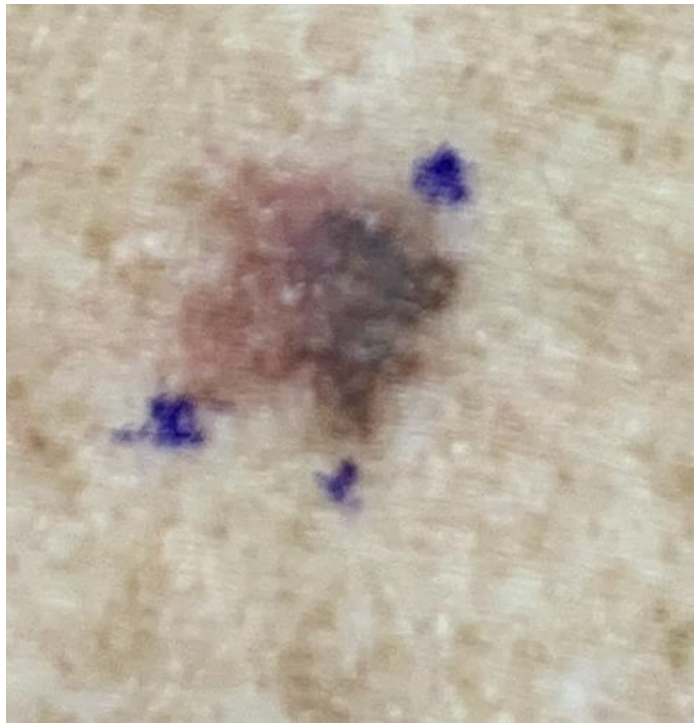
Risk Factors for Basal Cell or Squamous Cell Carcinoma

- Sun exposure
- Primary diagnosis of leukemia, lymphoma, malignant marrow disease, severe aplastic anemia
- Light skin color
- Younger age at transplantation
- Total Body Irradiation
- Chronic GVHD
- Immunosuppression for greater than 24 months

DePry, JL. JAMA Derm. 2015.
Omland, SH. JAMA Derm. 2016.

Risk Factors for Melanoma

- Personal or family history of melanoma
- Many moles
- T cell-depleted transplant
- Female sex
- Total Body Irradiation



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Omland, SH. JAMA Derm. 2016.

Other Risk Factors for Skin Cancer

- Studies in solid organ transplant recipients (prolonged immunosuppression) suggest timing of skin cancer screening based on:
  - History of previous skin cancer or pre-cancerous lesions
  - Spend more than an hour outside daily
  - Greater than 50 years old
  - Lived in hot climate for >30 years
  - Experienced sunburns
  - Decreased pigment in their skin

Skin Cancer Screening: Self-Exams

- ABCDEs of melanoma
- New, growing, open sore
- Spots that itch, hurt, crust, scab, bleed
- Bright light, full-length mirror, hand mirror, blow-dryer
- Ask for help

Skin Cancer Screening with Local Dermatologist

- Every 6-12 months
- Prepare for exam:
  - Identify lesions of concern
  - Remove nail polish and makeup
  - Wear hair loose

Sun Exposure

- Ultraviolet radiation is a cause of skin cancer
- At least 1 in 5 people will be diagnosed with skin cancer
- Some post-transplant medications may sensitize to sun
- Sun exposure can trigger GVHD

Bolognia, JL. Dermatology text

Sun Protection

- Sun protection can prevent:
  - Skin cancer
  - Benign skin lesions and rash
  - Aging of skin

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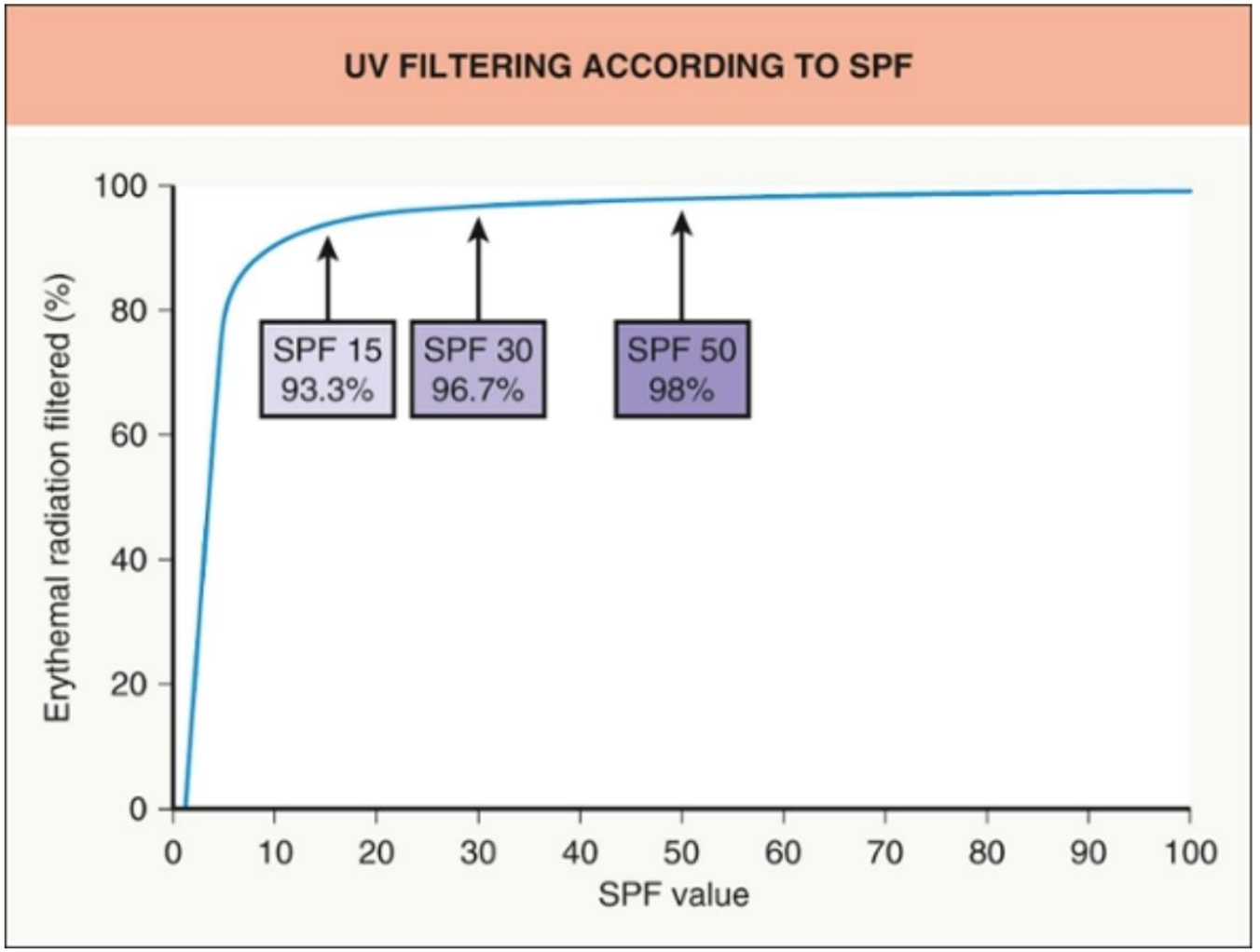
Sunscreen Properties

- Sunscreens limit UV wavelengths that interact with molecules in the skin
- Sunscreens are considered over-the-counter drugs regulated by FDA
- Sun Protection Factor (SPF):
  - SPF x sun exposure with the same level of redness
- “Broad Spectrum” if UVA and UVB protection
- “Water Resistant”

Sunscreen Properties



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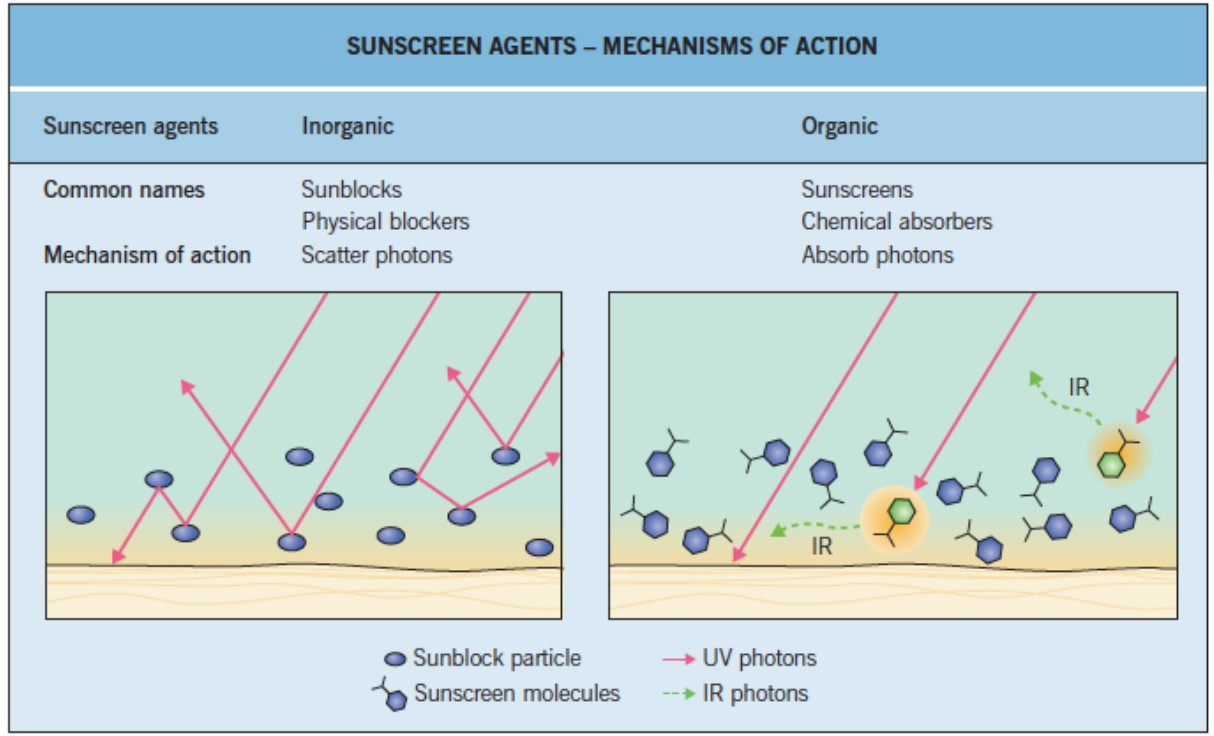
Sunscreen Mechanisms

Sunscreen forms a coating on the surface of the skin that filters out radiation

- chemical: absorbs light
- physical: mineral or inorganic, scatters light energy
    - Titanium dioxide
    - Zinc oxide
- Iron oxide: protects against UV and visible light
    - Can prevent redness and darkening of skin



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Why Doesn’t Sunscreen Always Work?

- People don’t often apply sunscreen at the same thickness as in studies
  - Most users apply 20-50%
  - To cover the skin of an adult: 2-3 tablespoons (1-1.5oz)
- Strategies to improve outcomes:
  - Apply twice
  - Use a product with higher SPF

Marko Metzinger Photography
www.markometzinger.com

Sun Protection Guidelines

- Avoid direct sun exposure between 10AM and 4PM
- Seek shade to shelter from direct sun
- Wear protective clothing, hat (wide-brim), sunglasses
- Apply sunscreen to all exposed skin when outdoors
- Use BROAD SPECTRUM sunscreen, SPF 30 or greater
- Use up to 1-2 ounces of sunscreen to cover exposed skin

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Sunscreen Guidelines

- Apply sunscreen 15 minutes before sun exposure
- Use water resistant sunscreen if swimming/perspiring
- Reapply sunscreen every 2 hours or after swimming/perspiring
- Spray sunscreens must be applied liberally

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Sunscreen Controversies

- Utilized for decades
- Great safety record
- Concerns from animal and lab studies
- Overall risk-benefit analysis favors sunscreens
- Major side effects:
  - Irritation
  - Allergic reactions

Do We Need Sun Exposure to Generate Vitamin D?

- Vitamin D levels in sunscreen users are lower than non-users, but within the normal range
- Vitamin D from food: fish oils, fortified milk and milk products
- Vitamin D supplementation

Indoor Tanning

- 400,000 skin cancers each year
- 75% increased risk of melanoma from one indoor tanning session before 35
- Any use of tanning devices associated with 2.5x for SCC and 1.5x for BCC
- Women with BCCs had on average twice as many visits to tanning beds
- Women younger than 30 are 6x more likely to get melanoma if indoor tanning beds

roswellpark.org/cancertalk/202105/truth-about-tanning-beds-4-lies-tanning-salons-tell-you

Summary

1. Transplant patients are at risk for malignant and non-malignant skin problems
2. There are good dry skin care techniques that can help alleviate itch/rash
3. Sun protection is important
4. Skin cancer screening should be done regularly
5. A variety of rashes can merit dermatologist evaluation

Questions?

Rachel Rosenstein, MD, PhD
Hackensack Meridian
School of Medicine

Let Us Know How We Can Help You

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