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Chronic Graft-versus-Host Disease of Skin and Connective Tissues

Celebrating a Second Chance at Life
Survivorship Symposium

July 11-17, 2020

Milan Anadkat, MD
Washington University
School of Medicine
in St. Louis

DERMATOLOGIC CHALLENGES IN PATIENTS UNDERGOING STEM CELL TRANSPLANTATION

Milan J. Anadkat, MD
Professor, Division of Dermatology
Washington University in St. Louis

Disclosures

- I have received honoraria as a consultant and/or speaker in the past from the following:
  - Abbvie
  - Adgero
  - Amgen
  - Astra Zeneca
  - Biogen
  - Boehringer-Ingelheim
  - Bristol Myers Squibb
  - Eisai
  - Eli Lilly
  - Genentech
  - ImClone
  - Therakos
  - Xoma
- These relationships have no relevance towards the following lecture

Objectives

1. Explain risk factors for developing skin GVHD
2. Describe the various manifestations of skin GVHD
3. Discuss potential therapies available to manage skin GVHD
4. Present best practices to minimize risk for developing skin cancer for patients with skin GVHD

What is GVHD?

- Graft (donor) versus host (recipient) disease
- New immune system cells attacking tissues in its new home
  - Appears "Unfamiliar"
- Skin (rash), Liver, Intestines (diarrhea) most common targets
- Lungs, Eyes also possible later on

Risk factors for Developing Skin GVHD

- Greater degrees of donor-recipient mismatch
- Older age of recipient or donor
- Female donors (especially after pregnancy)
- Stem Cells collected from bloodstream
  - instead of bone marrow or umbilical cord blood donation

Organs Affected by GVHD

- Skin - most commonly affected site (75%)
- Mouth (51–63%)
- Liver (29–51%)
- Other sites affected: Eyes, Genitals, GI tract, Lungs, Joints, Muscles, Nervous system

Manifestations of Skin GVHD

- Rash
- Sores in mouth or genitals
- Itching
- Change in skin color
- Sweat gland damage
  - Difficulty handling heat

Manifestations of Skin GVHD

- Tight skin
  - Mouth opening
  - Limited joint movement
  - “Cellulite” look
  - Tough to take deep breaths

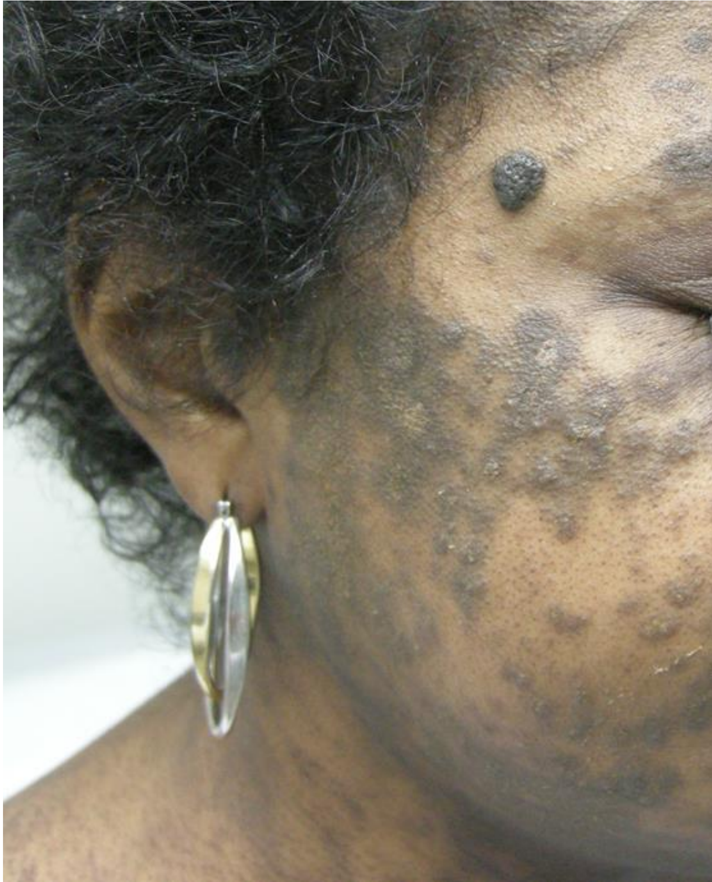
Rash Caused by GVHD

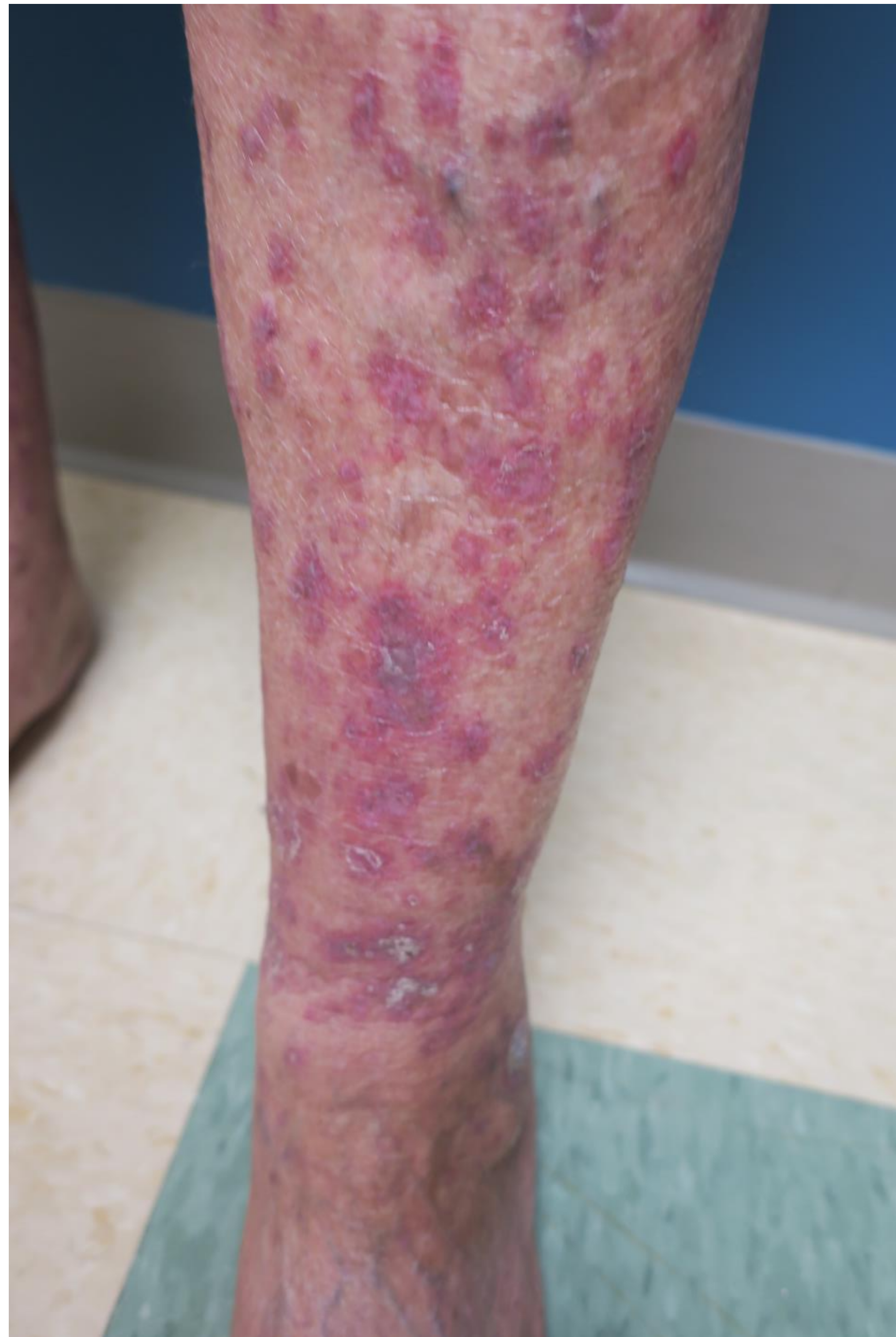
- Acute (soon after transplant)
  - Red and all over
- Chronic (usually months after transplant)
  - Purple spots
  - Tight skin
  - Shiny patches of skin

Acute Skin GVHD

Chronic Skin GVHD

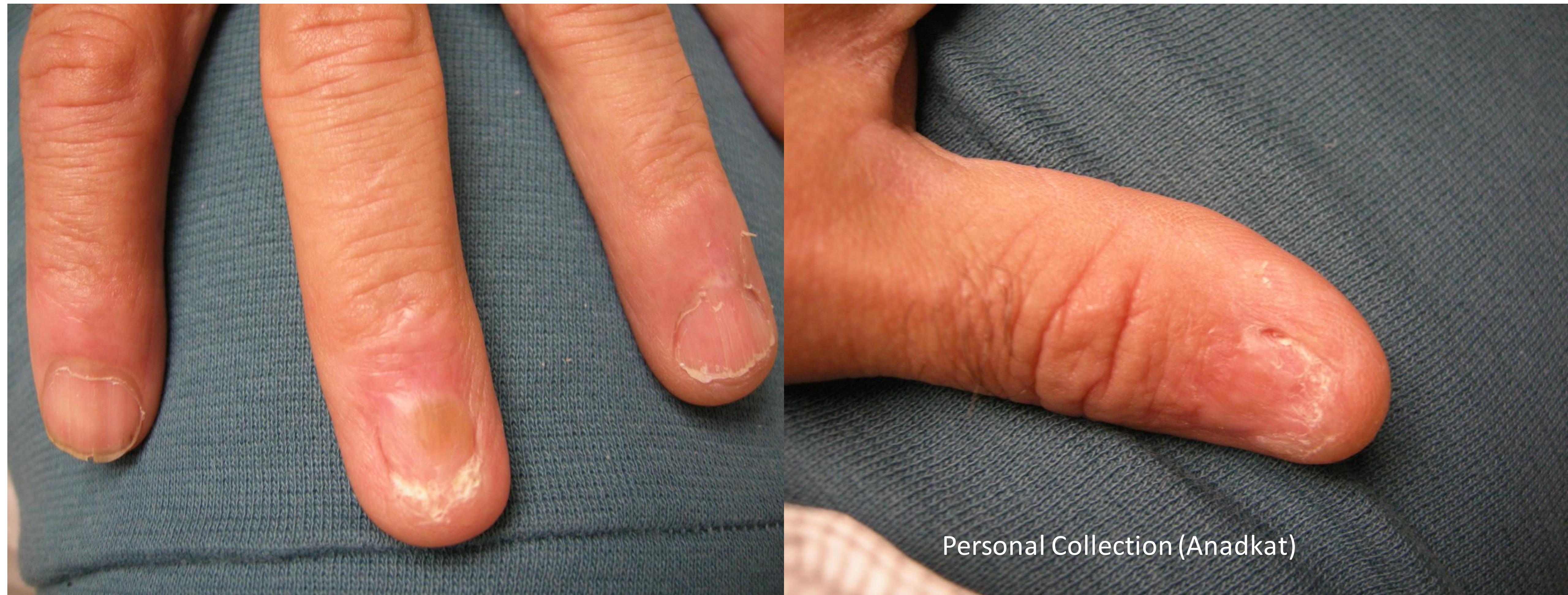
- Purple Skin = “Lichenoid”



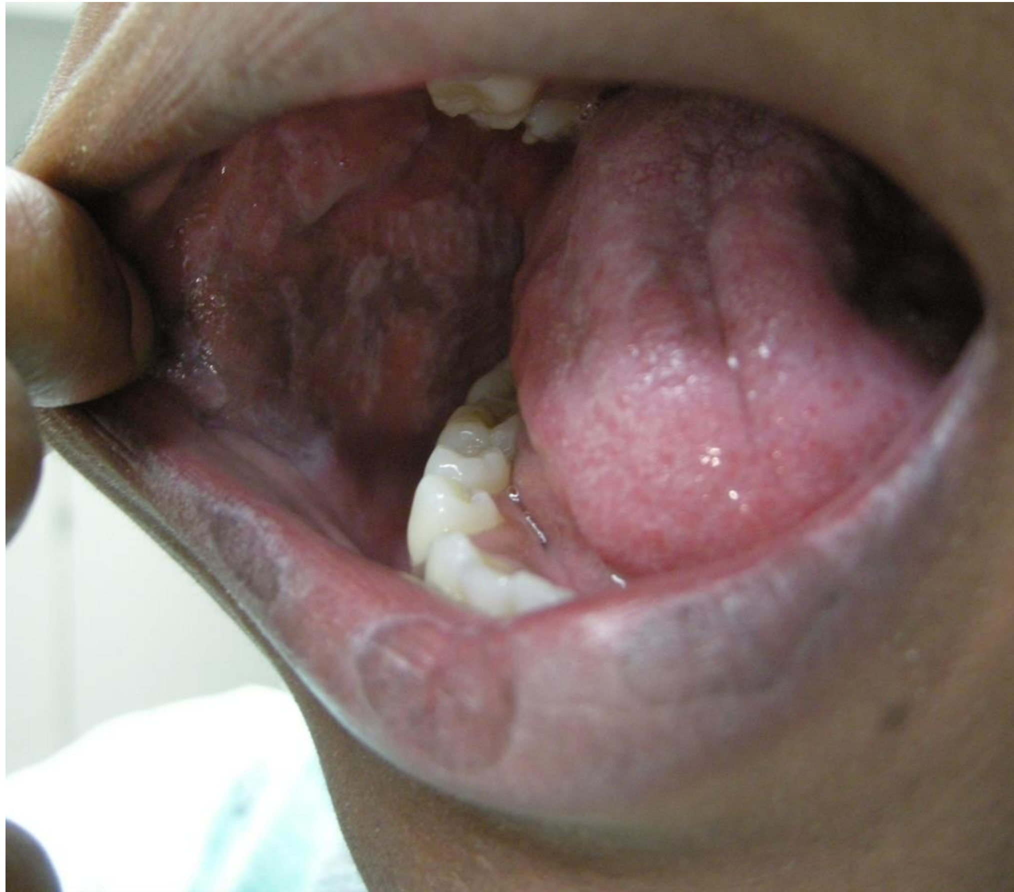


Personal Collection (Anadkat)

Chronic Skin GVHD
-"Lichenoid" Nail changes



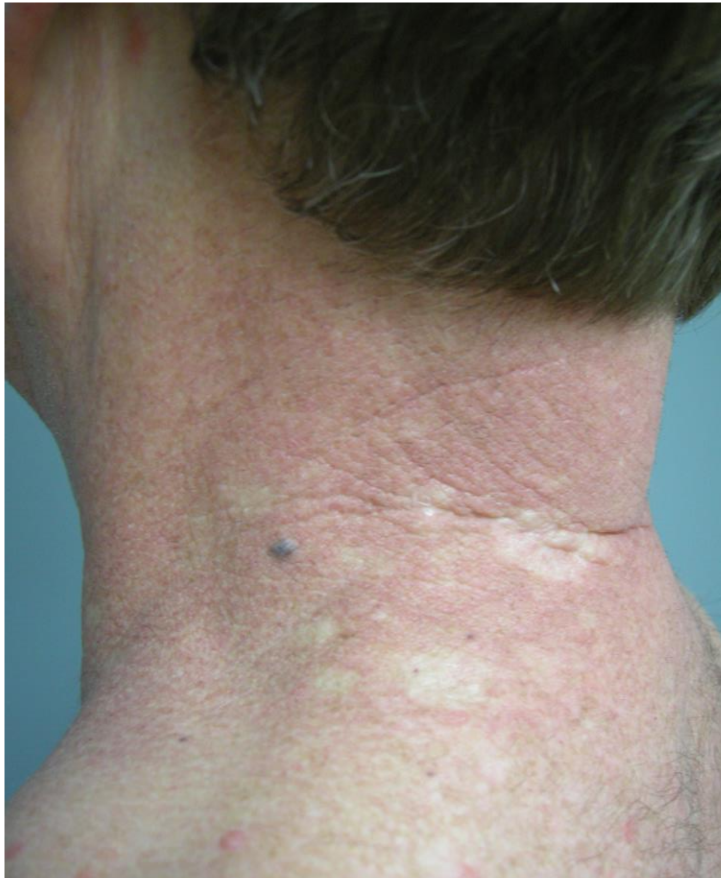
Chronic Skin GVHD
-"Lichenoid" Mouth changes



Personal Collection (Anadkat)

Chronic GVHD – "Sclerodermoid"

- Tight skin



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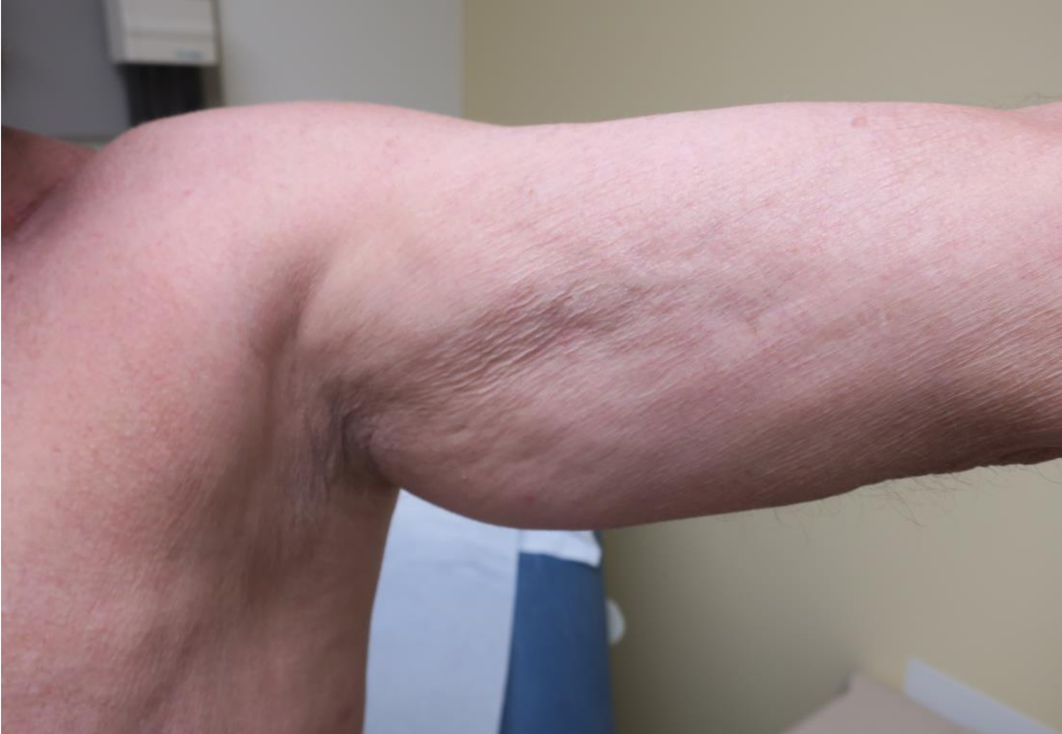
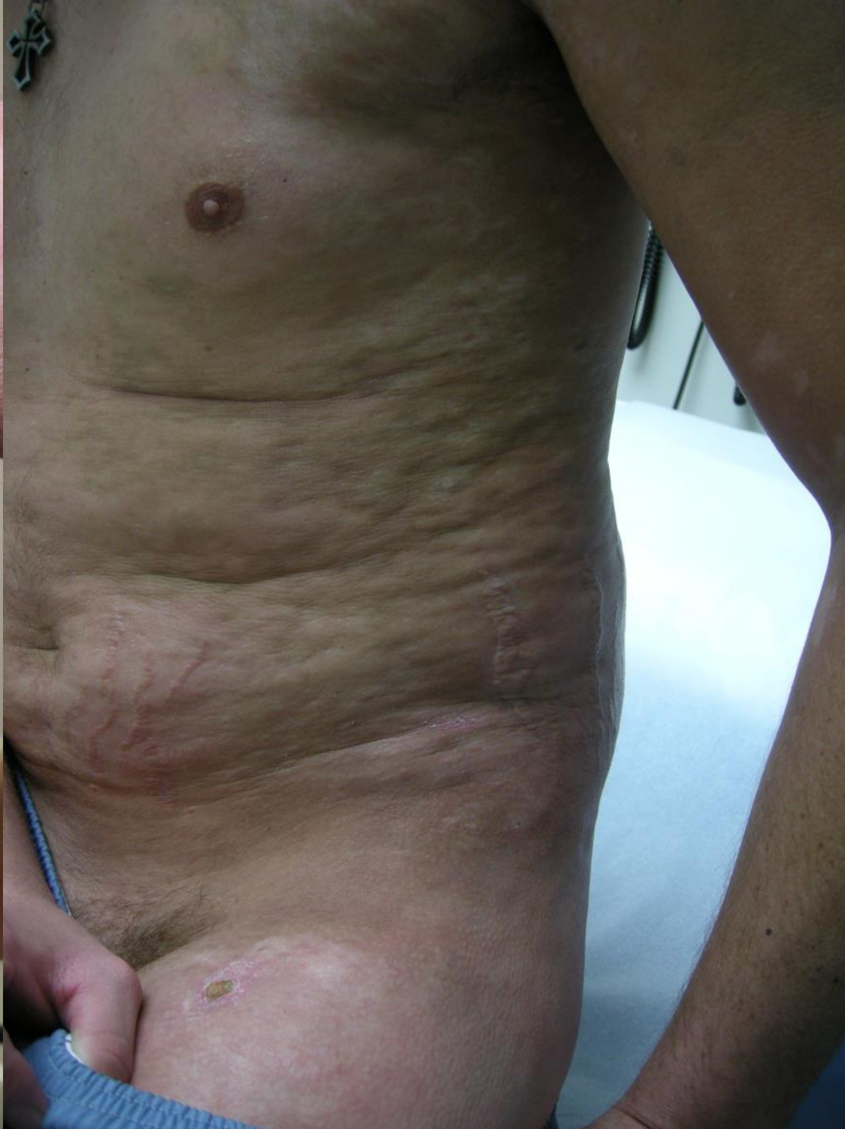
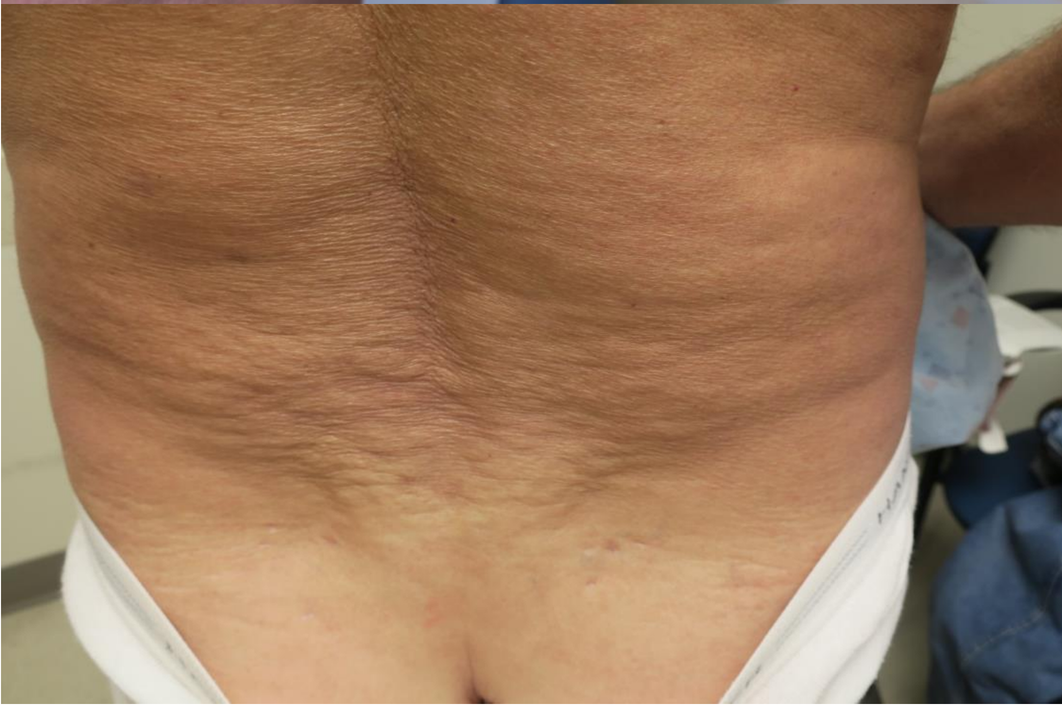


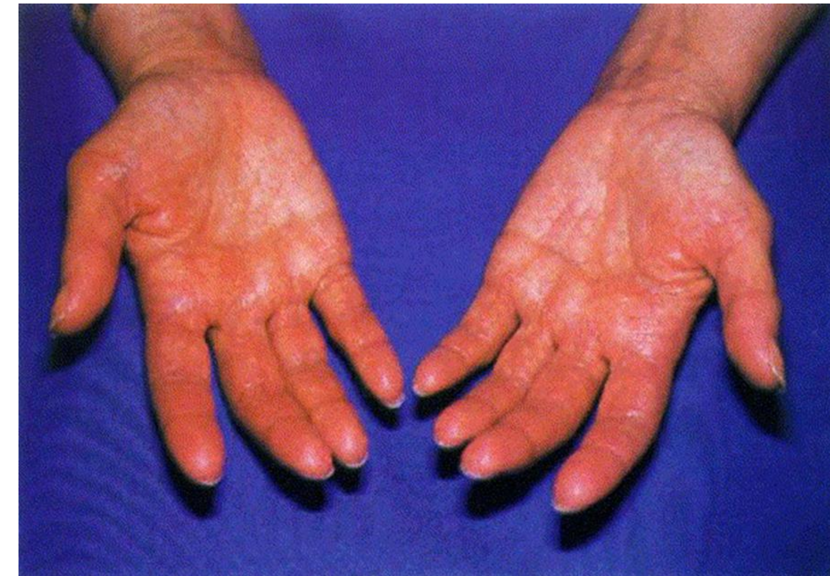




Personal Collection (Anadkat)

Overall GVHD Diagnosis Rules

- Acute vs chronic GVHD: <u>based on how it looks</u>
  - <u>NOT when it appears</u>
- Face/Scalp and Palm/Sole involvement unique
- Skin Biopsy not essential to make diagnosis



Based on NIH GVHD Guidelines (2005)

Treatment of Skin GVHD

- Treat symptoms
  - Itching
  - Decreased range of motion
  - Wounds
- Skin-specific therapies
- Part of the Oncology team approach

Skin-Specific Therapies

- Topical anti-inflammatory medicines
  - Steroid
  - Non-steroid (tacrolimus, pimecrolimus)
- Phototherapy
- Photopheresis
- Acitretin: vitamin A pill

https://www.dermnetnz.org/topics/topical-steroid

Phototherapy

- UV-B or UV-A
- Anti-inflammatory in skin
- Takes minutes
- Safe!

www.verywellhealth.com/phototherapy-overview-4177939

Extracorporeal Photopheresis (ECP)

- Light therapy to the blood
- Safe

www.nationwidechildrens.org/specialties/photopheresis-clinic

Managing Tight Skin

- Physical Therapy
- Deep Tissue Massage
- Stretching

Treatments used by the Oncology Team

- Prednisone
- Traditional Immunosuppressants
  - Mycophenolate, Tacrolimus, Cyclosporine
- Ruxolitinib (JAK inhibitor)
- Ibrutinib
- Rituximab
- Sirolimus
- Bortezomib

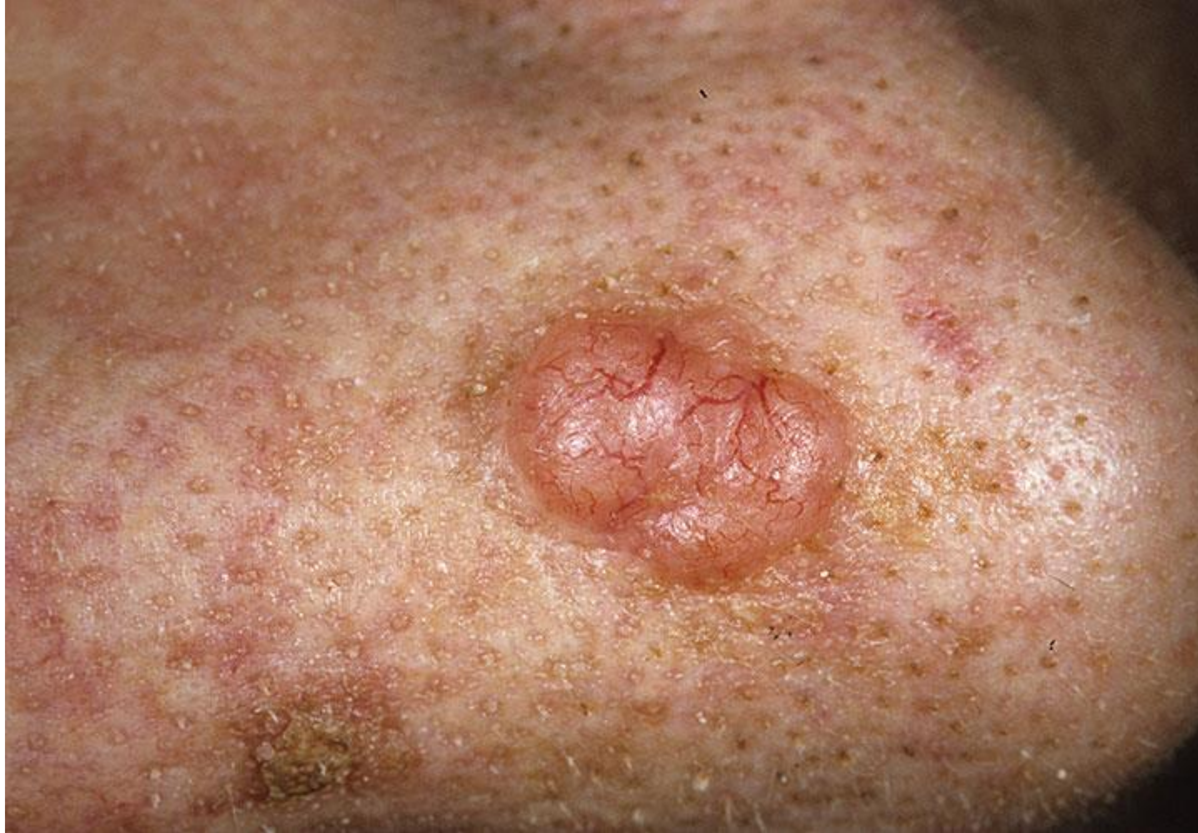
Skin GVHD Increases Risk of Skin Cancer

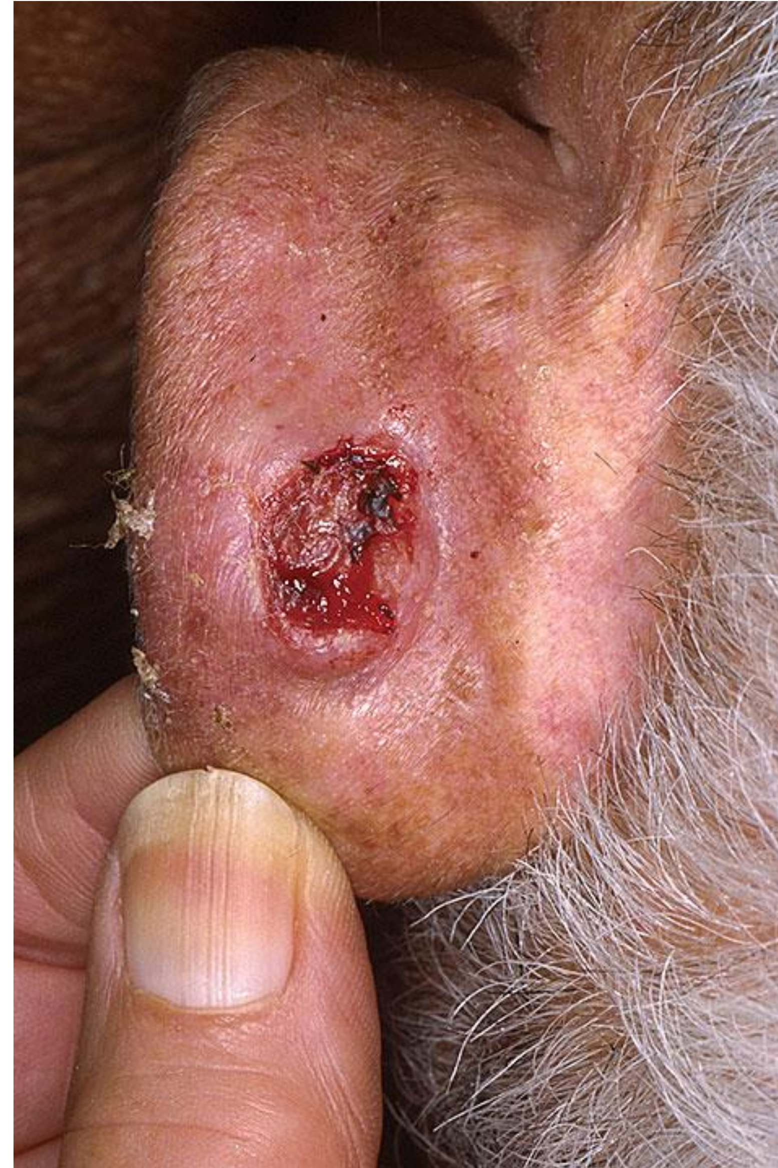
- Check your skin every 1-2 months
- Annual (at least) doctor skin checks recommended
- Skin cancer risk 30 times higher
- Skin cancers more likely in patients who have received:
  - Radiation
  - Immune suppressing therapy

Skin Cancer Types

1. Basal Cell Carcinoma - most common
2. Squamous Cell Carcinoma
3. Melanoma

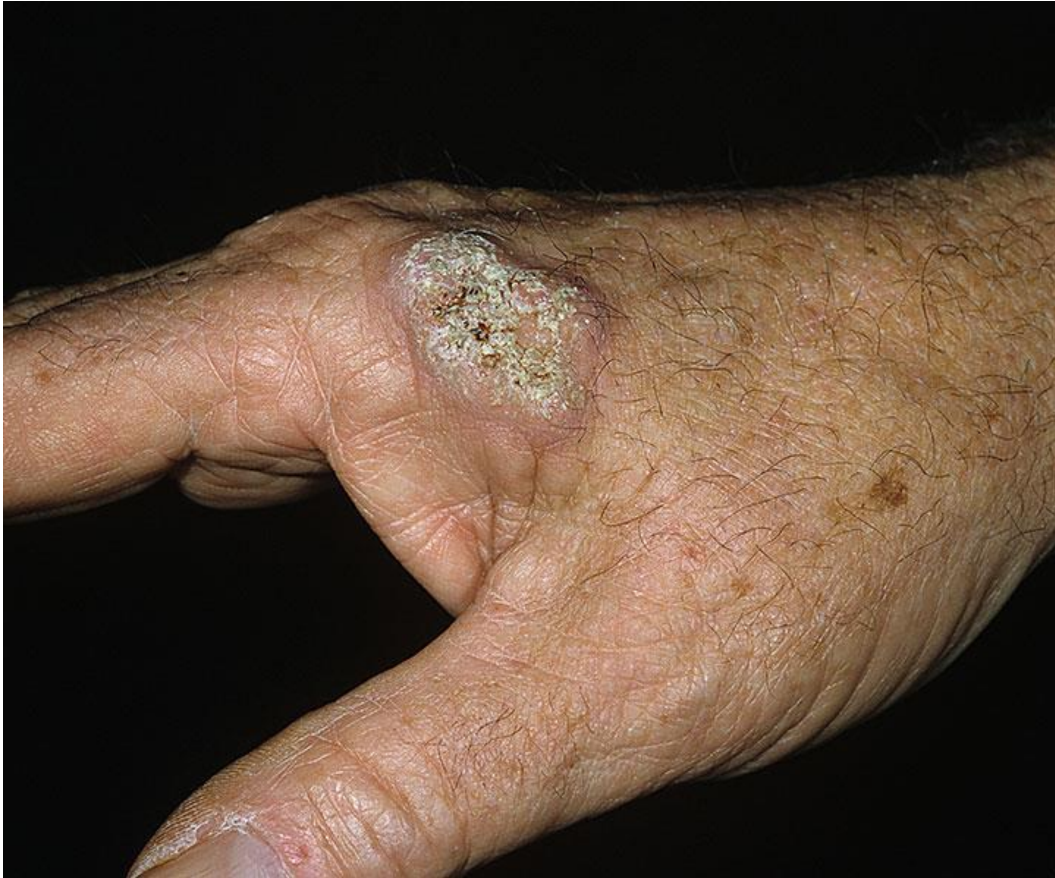
Basal Cell Carcinoma

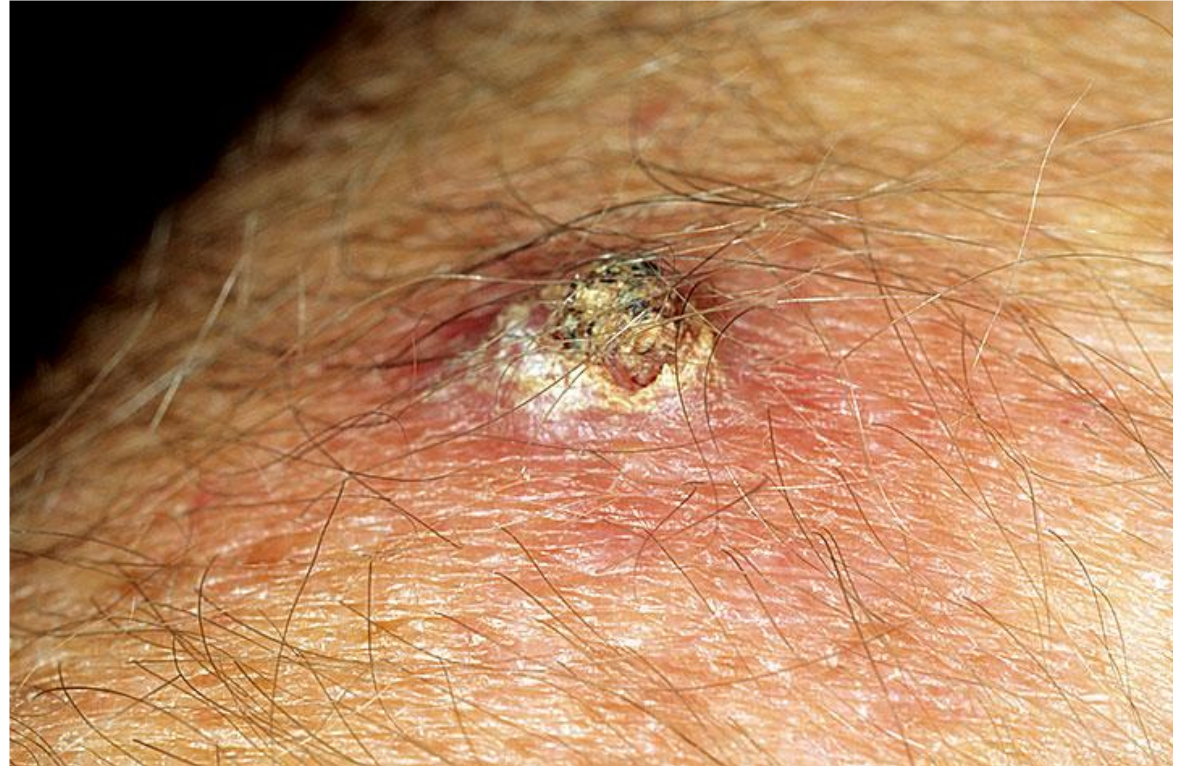




www.dermnet.com

Squamous Cell Carcinoma





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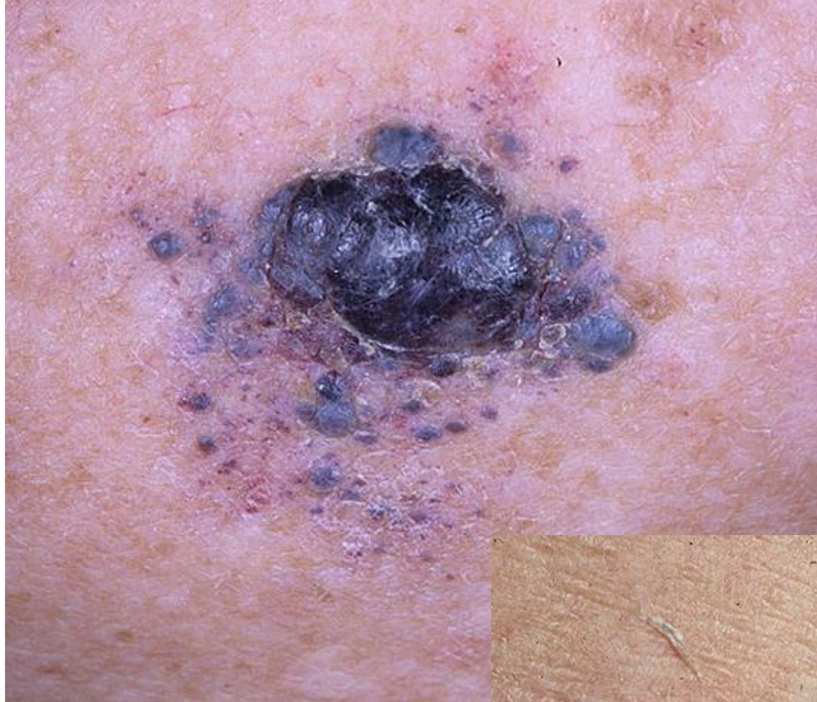
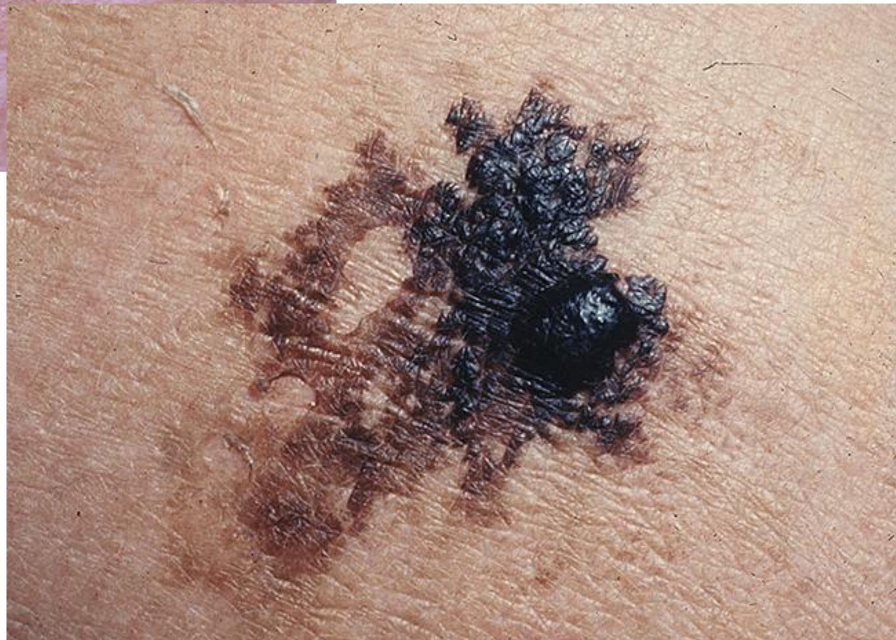
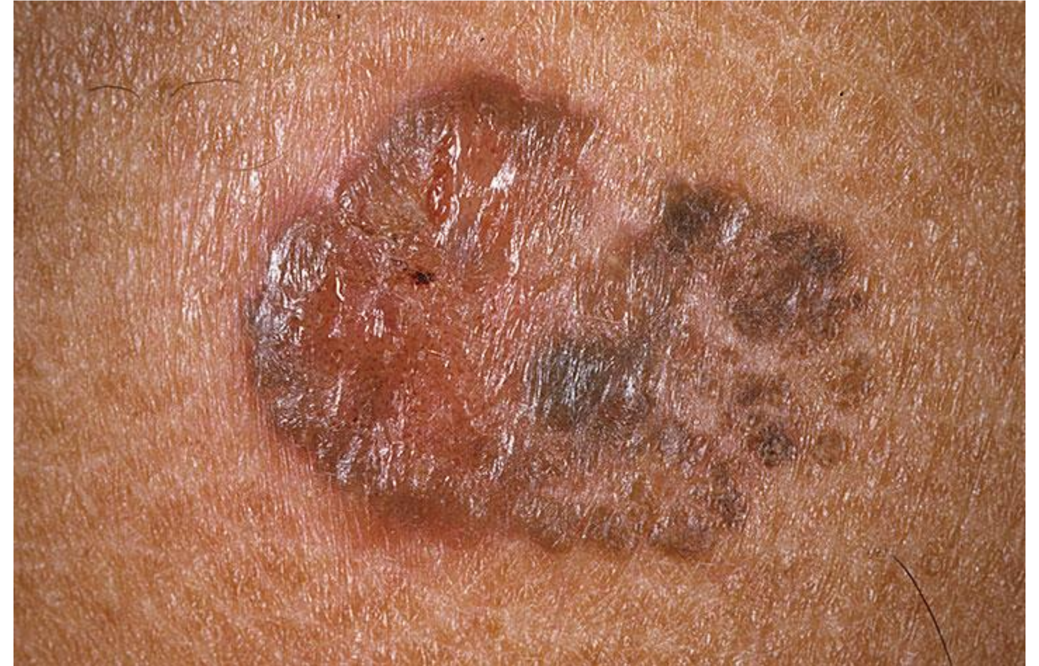
Malignant Melanoma







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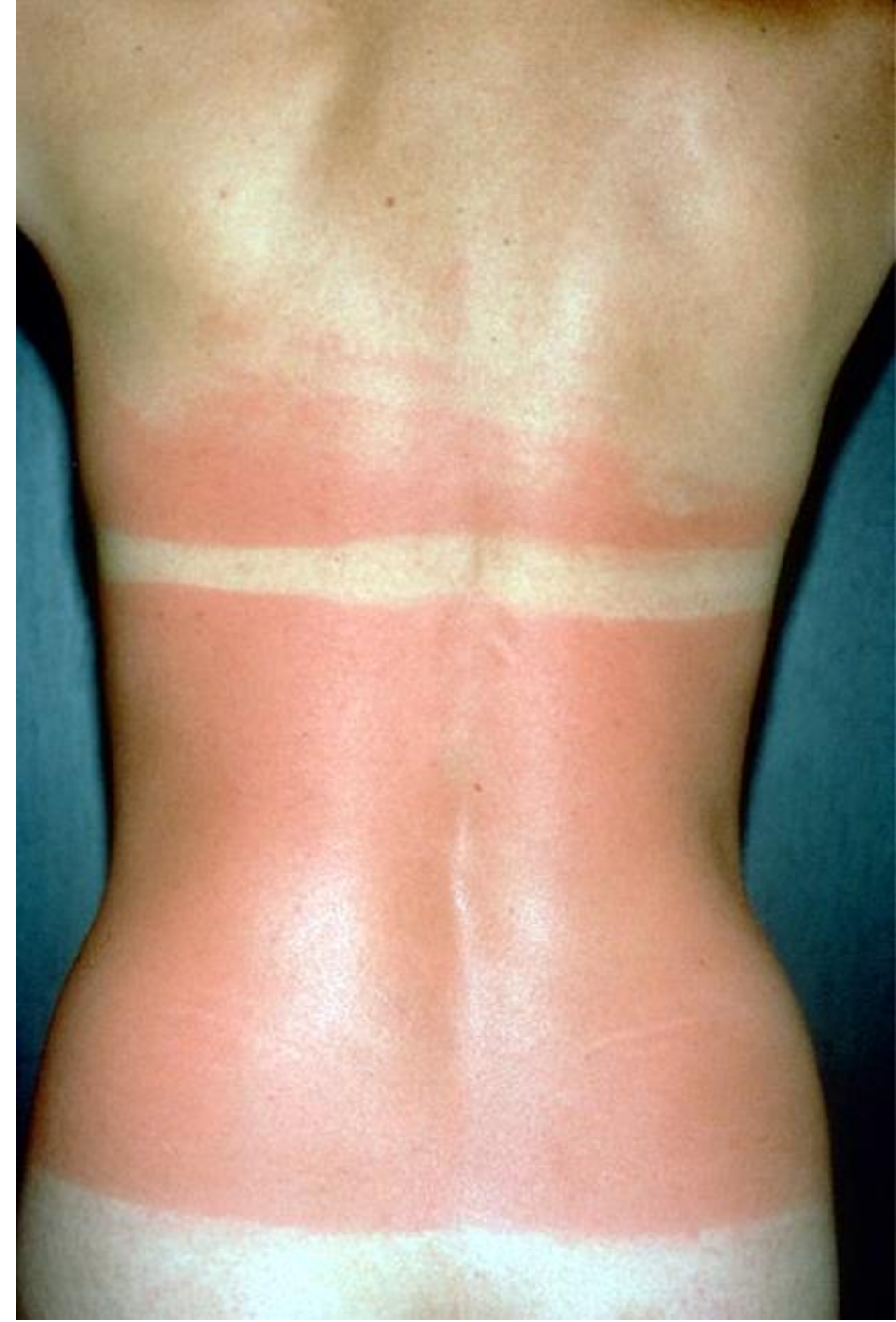
Steps You Can Take to Reduce Risk of Skin Cancer

- Annual skin exam over age 40
- Annual dermatologist exam if history of skin cancer
- May need more frequent monitoring
- ALWAYS consult your doctor if new concerning lesion appears

Prevention

There is no such thing…

…. as a "safe tan"



Sun Protection

- Clothing
  - Wide brim hats and Long sleeves
- Avoid Peak UV Hours
  - Esp. 10AM – 3PM
- UV Window Filters

Sunscreens

- Assumes 2g/cm^2 application (a lot!)
- SPF – only indicative of UVB (erythema) protection
  - SPF 15 - 93%
  - SPF 30 - 97%****
  - SPF 45 - 98%
  - SPF 55 - 99%

Sunscreen Application Tips

- Apply every day…Rain or shine!!
- Re-apply
  - after 90 minutes of exposure
  - after water immersion
- If you TAN or BURN, you didn’t put enough on!!

Thank You

- My Family
- My Colleagues
- My Mentors
- My Patients

manadkat@wustl.edu

Questions?

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