AETC AIDS Education & Training Center Program Northeast/Caribbean

Practical Assessment and Management of Common Cutaneous Disorders in People with HIV

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Objectives

In PWH, we will…

Review inflammatory and infectious skin disorders

Describe common and uncommon presentations

Select the safest biologic medications for psoriasis and eczema

Discuss real cases from the inpatient dermatology service focusing on assessment and management pearls

Outline

Introduction/Epidemiology

Review topical steroids

Inflammatory dermatoses
Xerosis cutis
Psoriasis
Atopic dermatitis/eczema
Seborrheic dermatitis

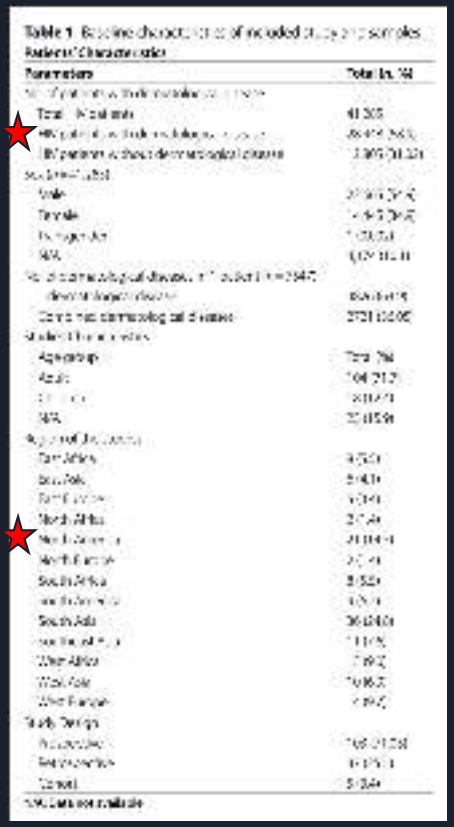
Infections
Viral (HSV, VZV, HPV, MCV, Mpox)
Fungal (dermatophytosis/tinea/onychomycosis)

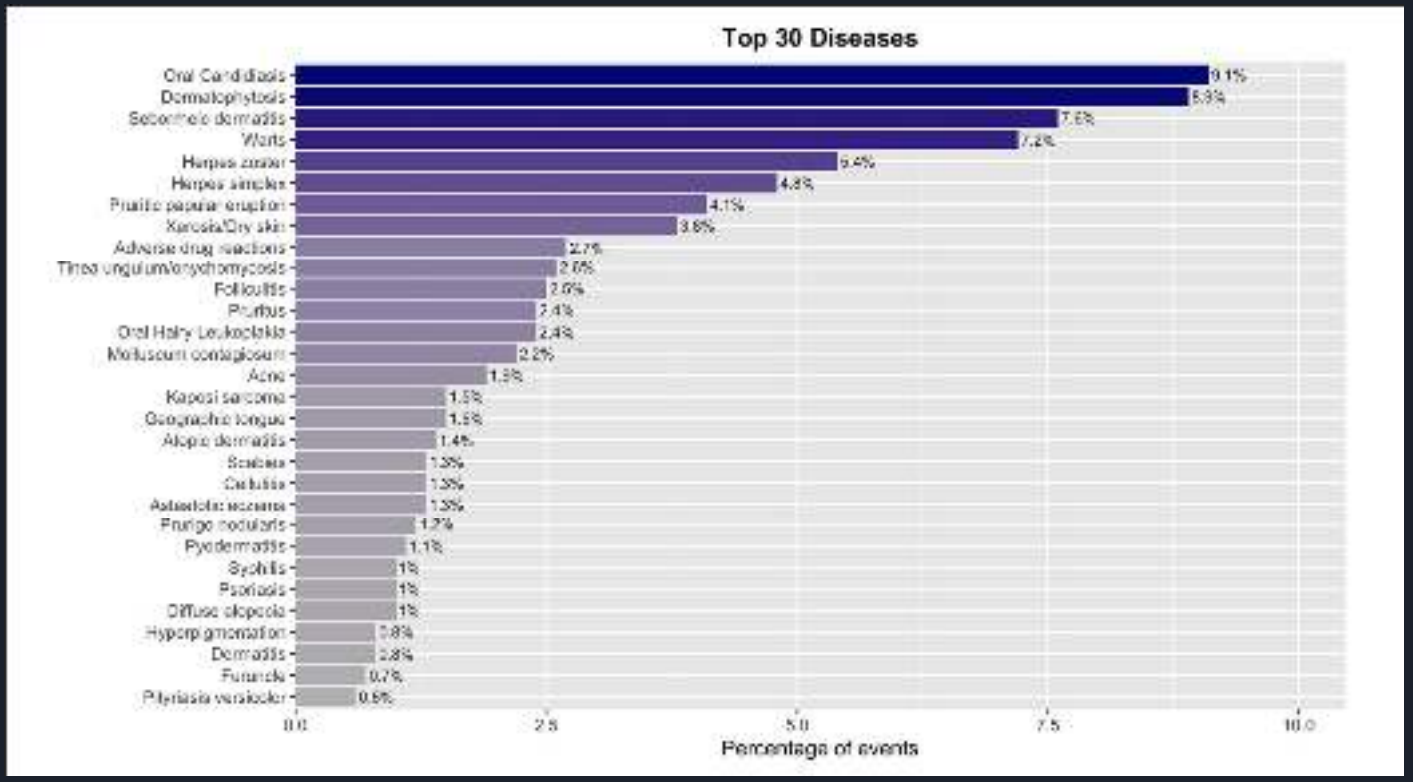
Key Points

Epidemiology

SYSTEMATIC REVIEW Open Access

Dermatological manifestation of HIV infection: systematic review and meta-analysis

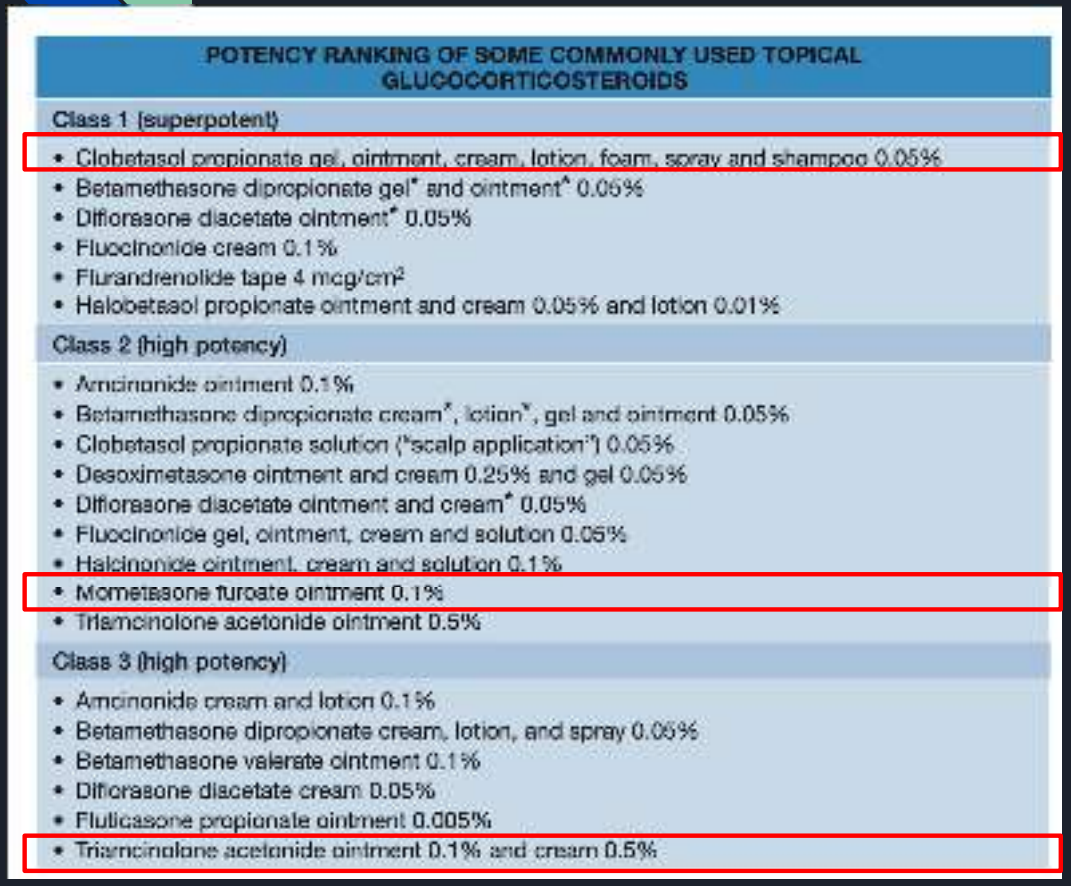




CD4+ Count Matters

CD4+ Count	Inflammatory	Infectious	Neoplasm
350-499 cells/mm^3	Recurrent oral ulcerations, pruritic papular eruption, **seborrheic dermatitis**	**Herpes zoster**, **onychomycosis**, angular cheilitis	-
200-349 cells/mm^3	-	Oropharyngeal candidiasis, oral hairy leukoplakia (EBV)	-
<200 cells/mm^3	-	**Chronic herpes simplex infection**, disseminated endemic mycoses, extrapulmonary cryptococcosis	**Kaposi sarcoma**

Topical Steroids - Ointments > Creams/Lotions



POTENCY RANKING OF SOME COMMONLY USED TOPICAL GLUCOCORTICOSTEROIDS

Class 1 (superpotent)

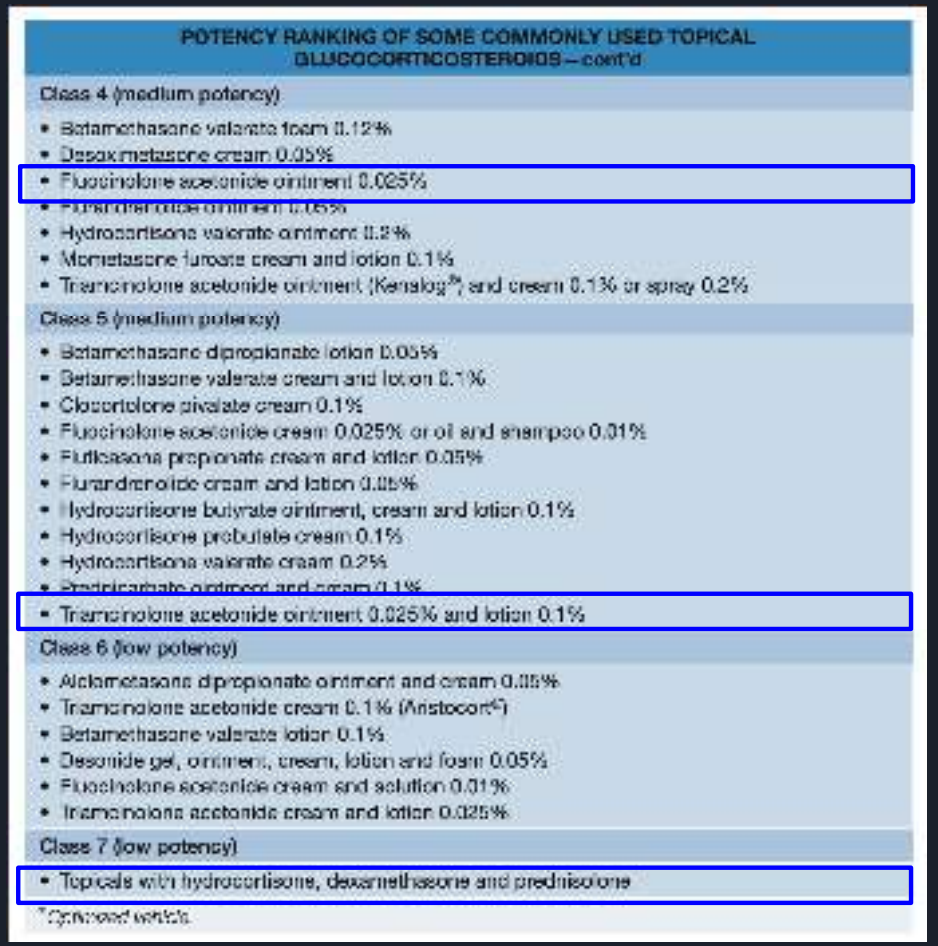
- Clobetasol propionate gel, ointment, cream, lotion, foam, spray and shampoo 0.05%
- Betamethasone dipropionate gel* and ointment^ 0.05%
- Diflorasone diacetate ointment* 0.05%
- Fluocinonide cream 0.1%
- Flurandrenolide tape 4 mcg/cm²
- Halobetasol propionate ointment and cream 0.05% and lotion 0.01%

Class 2 (high potency)

- Amcinonide ointment 0.1%
- Betamethasone dipropionate cream*, lotion*, gel and ointment 0.05%
- Clobetasol propionate solution ("scalp application") 0.05%
- Desoximetasone ointment and cream 0.25% and gel 0.05%
- Diflorasone diacetate ointment and cream* 0.05%
- Fluocinonide gel, ointment, cream and solution 0.05%
- Halcinonide ointment, cream and solution 0.1%
- Mometasone furoate ointment 0.1%
- Triamcinolone acetonide ointment 0.5%

Class 3 (high potency)

- Amcinonide cream and lotion 0.1%
- Betamethasone dipropionate cream, lotion, and spray 0.05%
- Betamethasone valerate ointment 0.1%
- Diflorasone diacetate cream 0.05%
- Fluticasone propionate ointment 0.005%
- Triamcinolone acetonide ointment 0.1% and cream 0.5%



POTENCY RANKING OF SOME COMMONLY USED TOPICAL GLUCOCORTICOSTEROIDS – cont'd

Class 4 (medium potency)

- Betamethasone valerate foam 0.12%
- Desoximetasone cream 0.05%
- Fluocinolone acetonide ointment 0.025%
- Hydrocortisone valerate ointment 0.2%
- Mometasone furoate cream and lotion 0.1%
- Triamcinolone acetonide ointment (Kenalog®) and cream 0.1% or spray 0.2%

Class 5 (medium potency)

- Betamethasone dipropionate lotion 0.05%
- Betamethasone valerate cream and lotion 0.1%
- Clocortolone pivalate cream 0.1%
- Fluocinolone acetonide cream 0.025% or oil and shampoo 0.01%
- Fluticasone propionate cream and lotion 0.05%
- Flurandrenolide cream and lotion 0.05%
- Hydrocortisone butyrate ointment, cream and lotion 0.1%
- Hydrocortisone probutate cream 0.1%
- Hydrocortisone valerate cream 0.2%
- Triamcinolone acetonide ointment 0.025% and lotion 0.1%

Class 6 (low potency)

- Alclometasone dipropionate ointment and cream 0.05%
- Triamcinolone acetonide cream 0.1% (Aristocort®)
- Betamethasone valerate lotion 0.1%
- Desonide gel, ointment, cream, lotion and foam 0.05%
- Fluocinolone acetonide cream and solution 0.01%
- Triamcinolone acetonide cream and lotion 0.025%

Class 7 (low potency)

- Topicals with hydrocortisone, dexamethasone and prednisolone

*Optimized vehicle

Topical Steroids - Vehicles

Table 40-4 Considerations for choosing a vehicle for the topical corticosteroid

Preparation	Composition	Skin hydration versus drying	Preferred dermatoses or site of use	Preferred location of use	Cosmesis	Potential for irritation
Ointment	Water in oil emulsion	Very good skin hydration	Best for thick, lichenified, or scaly dermatoses	Best for thick palmar or plantar skin; avoid with naturally occluded areas	Very greasy	Generally low
Cream	Oil in water emulsion	Moderate in skin hydrations potential	Best for acute, subacute or weeping dermatoses	Good for moist skin and intertriginous areas	Elegant	Variable; require preservatives
Gel	Cellulose cut with alcohol or acetone	Drying	Scalp or dermatoses in dense hair areas	Best for naturally occluded areas, scalp, and mucosa	Elegant	Higher
Lotion	Oil in water	Drying	Scalp or dermatoses in dense hair areas	Best for naturally occluded areas and scalp	Elegant	Higher
Solution	Alcohol	Drying	Scalp or dermatoses in dense hair areas	Best for naturally occluded areas and scalp	Elegant	Higher

Topical Steroids - Severity & Location

Table 40-3 Considerations for choosing a topical corticosteroid product

Potency (Class)	Type of dermatosis	Extent of dermatoses	Duration of TCS Usage	Location of dermatoses	Usage in infants and children	State of the epidermis
Superpotent (I)	Dermatoses resistant to intermediate or high potency TCS	Avoid extensive application (>50 g weekly)	For short term use only, ideally 2–3 weeks at a time	Do not use on the face, axillae, submammary area or groin	Avoid use in infants and children under 12 years	Best for thick, lichenified or hypertrophic skin; avoid with thin skin
High (II & III)	Severe	Avoid extensive application (>50 g weekly)	For short term use only, ideally 2–3 weeks at a time	Do not use on the face, axillae, submammary area or groin	Avoid use in infants and children under 12 years	Best for thick, lichenified or hypertrophic skin; avoid with thin skin
Intermediate (IV & V)	Moderate	Best for short term treatment of extensive dermatoses	Avoid extended use (>1–2 weeks) in infants and children	Best on trunk and extremities	Avoid extended use (>1–2 weeks) in infants and children	Safer for short term use on thin skin; less effective on thicker skin
Low (VI & VII)	Steroid sensitive	Preferred for treatment of large areas	Best if long term treatment is required	Best choice for face, axilla, groin, and other moist, occluded areas	Infants and children	Best for thin skin; not effective on thicker skin

Inflammatory Skin Disorders

Xerosis cutis

Atopic dermatitis

Psoriasis

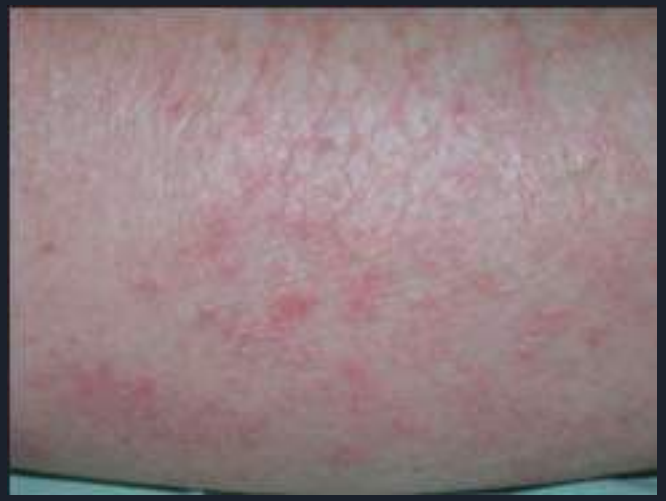
Seborrheic dermatitis

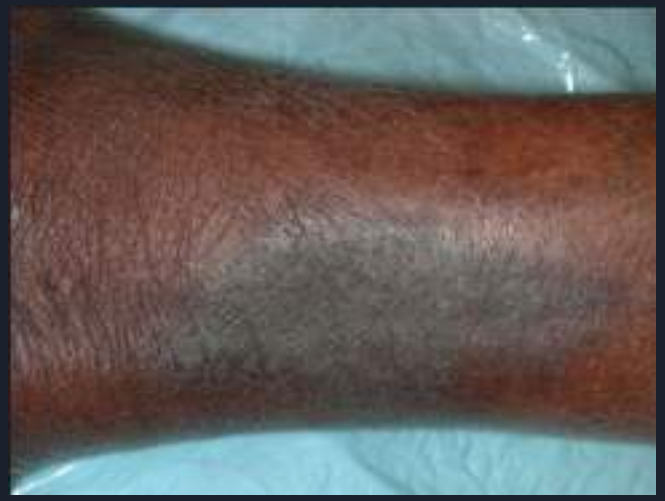
Xerosis cutis / Asteatotic eczema

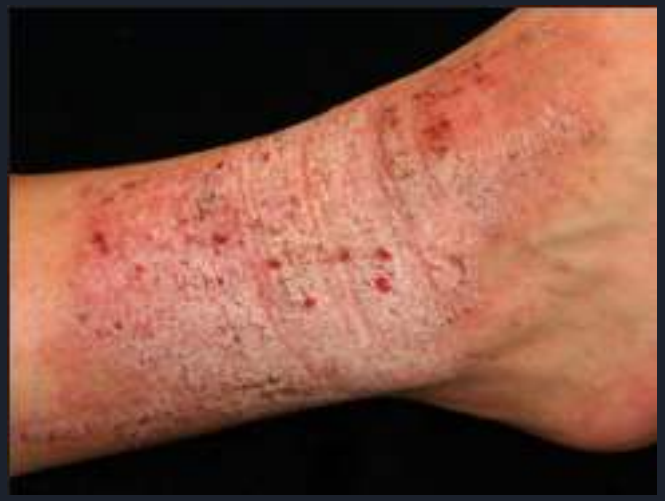
Clinical: dry, cracked, fissured skin with scaling; m/c affect the lower legs

At risk for allergic or irritant contact dermatitis, infections

Chronic scratching → lichen simplex chronicus







Xerosis cutis / Asteatotic eczema - MANAGEMENT

Basic labs: thyroid function, renal and liver function, **zinc level**, malabsorption

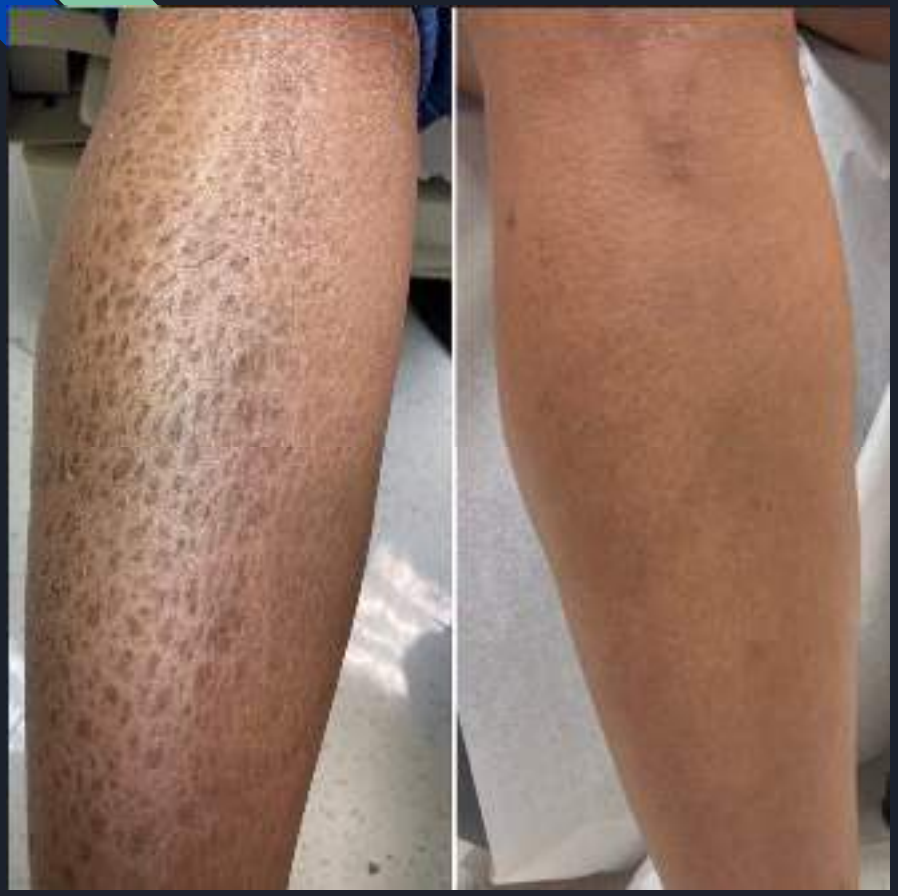
Lifestyle changes: avoid freq and hot baths/showers - use mild soaps or non-soap cleansers - humidifier

Treatments: if there is redness/erythema (low to mid-potency topical steroids) → ointment > creams

Recs: triamcinolone 0.1% or hydrocortisone 2.5% → BID x 2 weeks - combine with intense moisturizing regimen with cream or petrolatum-based emollients (CeraVe cream, Vaseline) on arms and legs after shower/bath

*if pt has recurrent erythema, can use topical steroids M/W/F indefinitely, combine with emollient

Acquired Ichthyosis / Xerosis



Treatment
Amlactin 2% lotion + Ebanel urea 40%/salicylic acid 2% cream
Mix the two together in a large jar and apply to affected areas daily after shower

Get Ebanel on Amazon ($15 USD)

Psoriasis

Background	60% psoriasis patients have genital lesions Remains undertreated Itch is a common symptom
Clinical	Plaque psoriasis: scaly red/pink/violaceous scaly plaques Inverse psoriasis: less scaly affecting the body folds, umbilicus, foreskin, scrotum and glans Nails: pitting, oil spots, onycholysis
PLWH	Severe erythrodermic or widespread plaque psoriasis Flare of psoriasis during IRIS
Diagnostics	Clinical (examine nails); skin biopsy
Management	Topical steroids, topical non-steroidals (tapinarof, roflumilast), phototherapy, biologics (IL-17 or IL-23 inhibitors)
Special consideration	Genital lesions impair quality of life and sexual function

Genital Psoriasis + Nail Psoriasis

Final Diagnosis

A. Skin, Scrotum, Shave Biopsy:

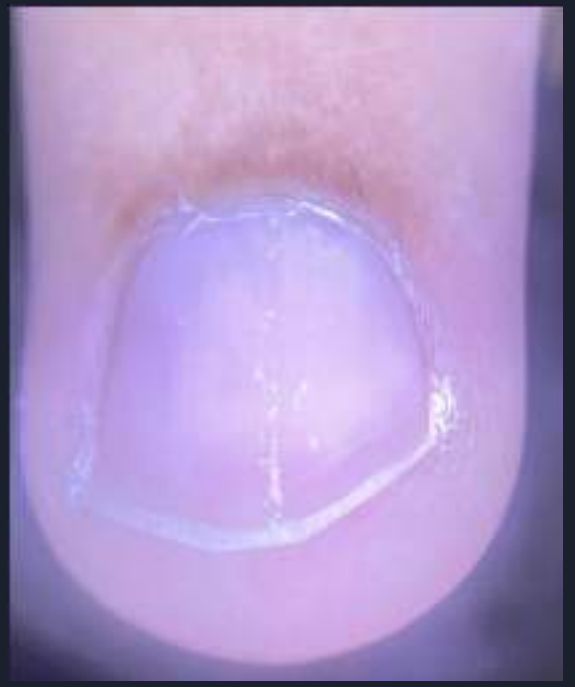
- PSORIASIFORM DERMATITIS CONSISTENT WITH PSORIASIS

Note: A PAS-D stain is negative for fungi.

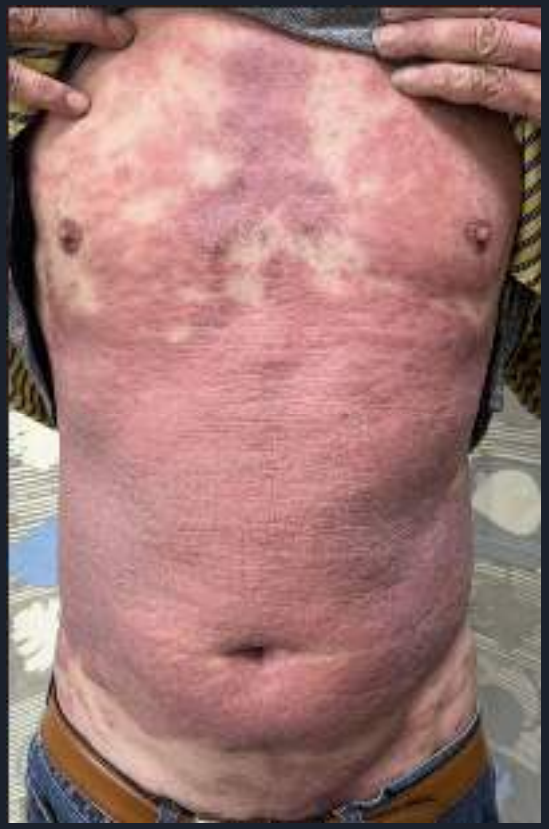
Electronically signed out and reported on 9/2/23
I certify that I personally conducted the diagnostic evaluation of the above specimen(s) and have rendered the final diagnosis(es).

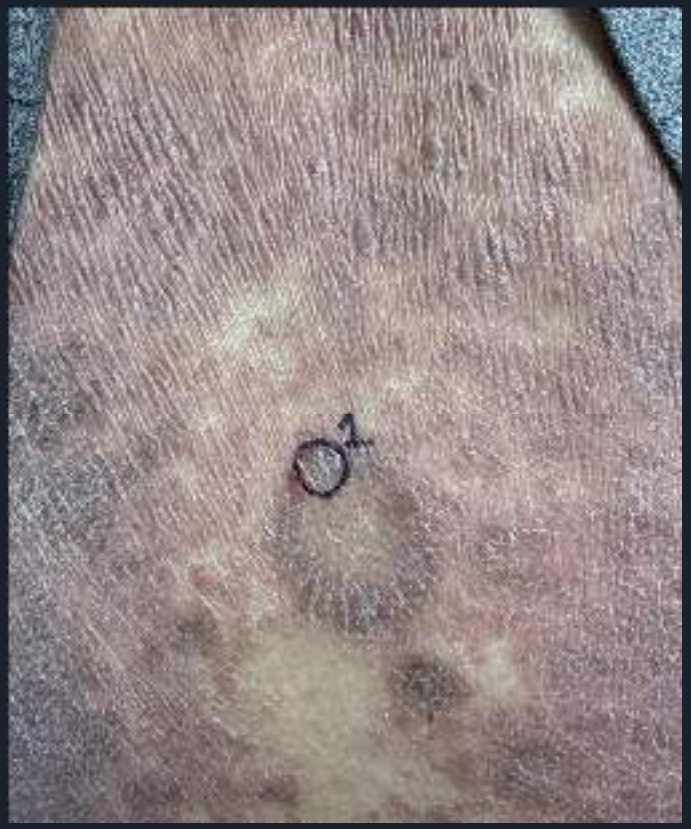
Electronically signed by Rajat Kohli, MD on 9/5/23 at 1113

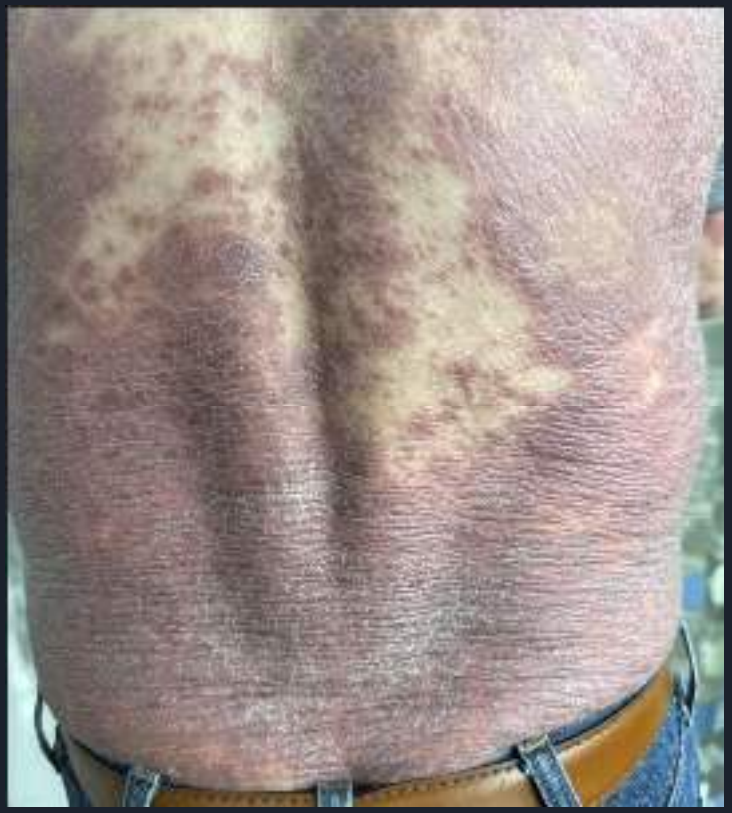
Clinical Information
scaly plaques of the scrotum for 10+ yrs, HCV negative, knee psoriasis



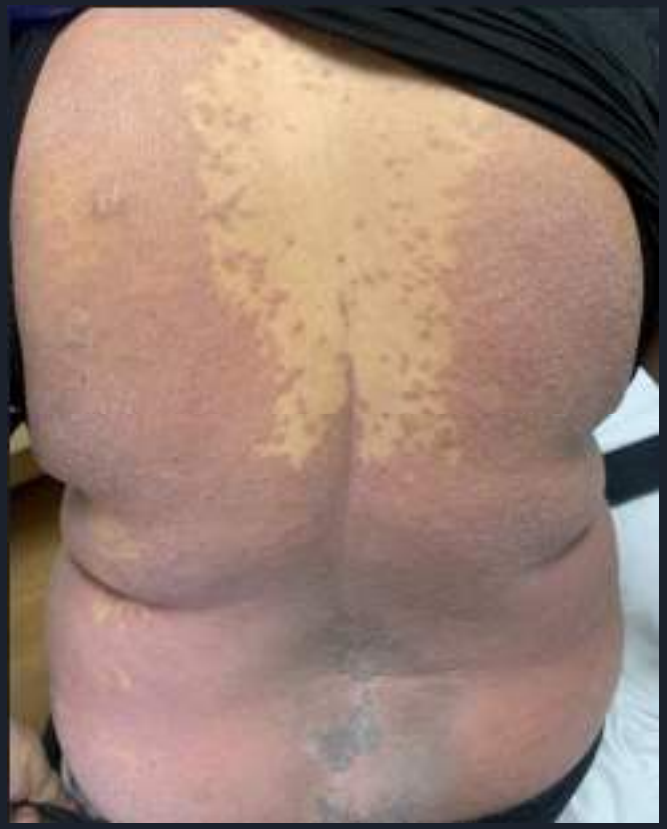
Erythrodermic Psoriasis
CD4: 279; VL: 38 copies/mL

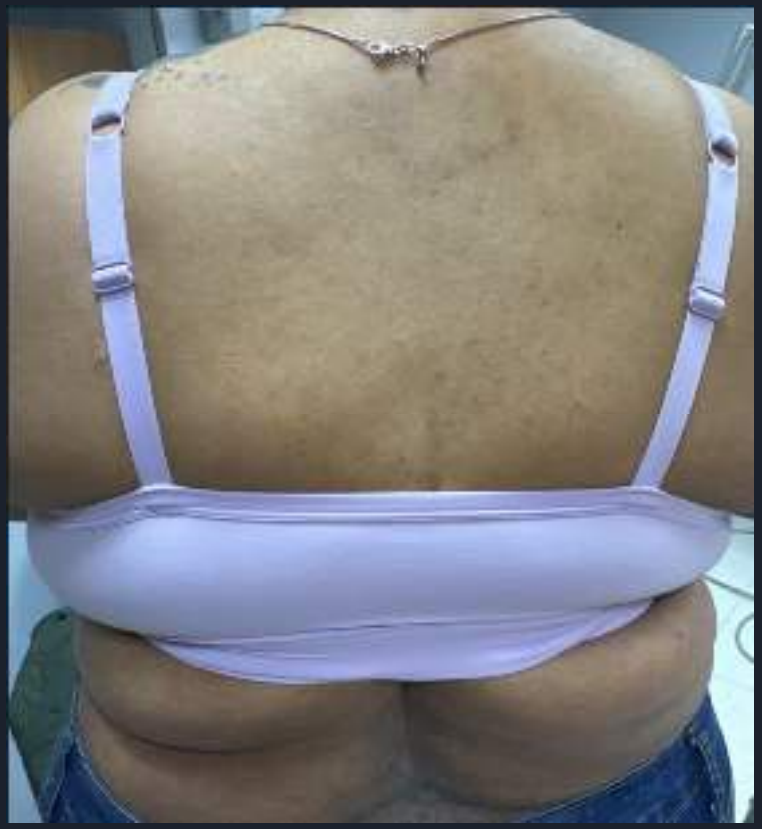


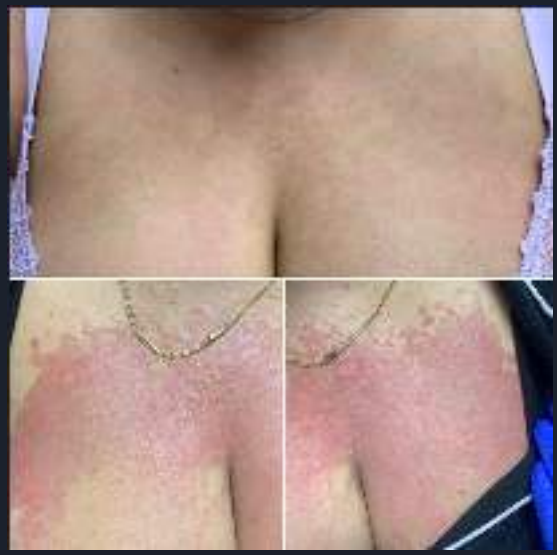




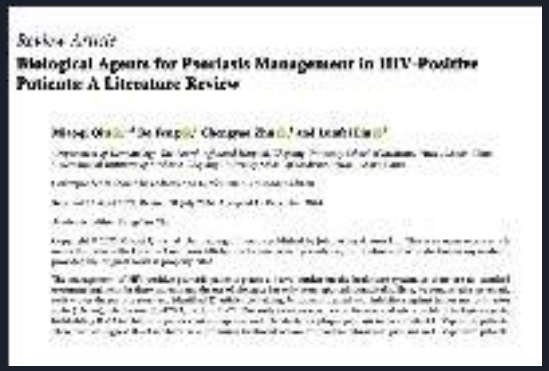
Erythrodermic Psoriasis
Cyclosporine + Guselkumab (IL-23 inhibitor)







Psoriasis Biologics and HIV


Review Article

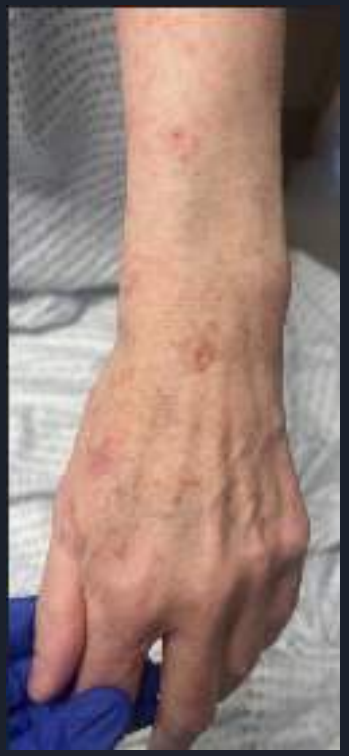
Biological Agents for Psoriasis Management in HIV-Positive Patients: A Literature Review

Number of articles	22
Number of patients	34
Biologics (n)	TNF (8), IL-17 (11), IL-23 (11)
Biologic	Observations
TNF inhibitors	Decreased CD4, increased VL
IL-17 inhibitors	Opportunistic infections: **candidiasis** (VL and CD4 count stable)
IL-23 inhibitors	**No serious adverse reactions**, no changes to VL and CD4 count

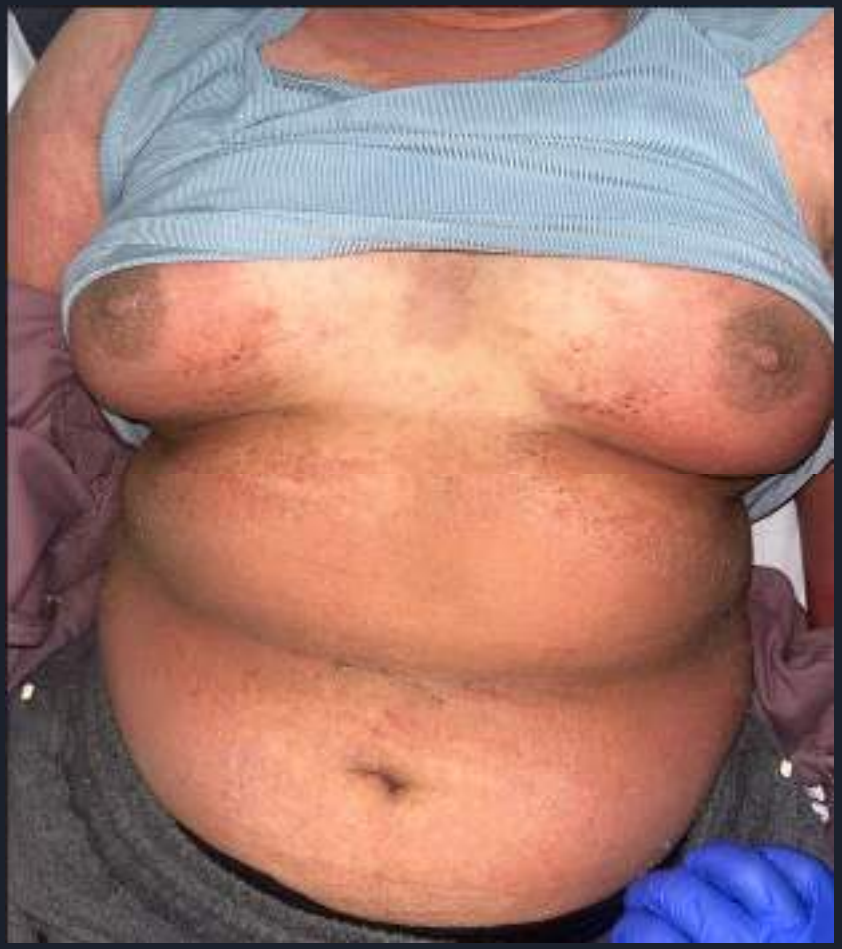
Atopic Dermatitis

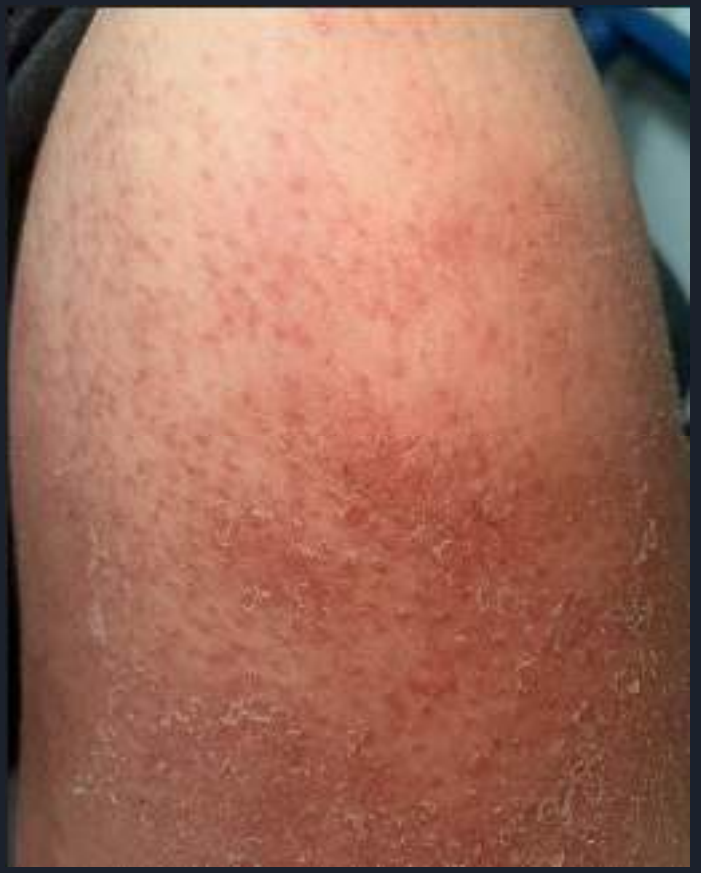
Background	30-50% of PLWH vs 2-20% in seronegative Mediated by Th2 cytokines → eosinophilia and elevated IgE
Clinical	Pruritic scaly red/pink/violaceous papules and plaques
PLWH	Th1/Th2 cytokine imbalance predisposes atopic manifestations
Diagnostics	Clinical; skin biopsies to exclude T-cell lymphoma Consider serum IgE level
Management	Topical steroids; emollients; phototherapy; biologics (IL-4/13 or IL-13 inhibitor)
Special consideration	Severe cases may require hospitalization and referral to dermatology Must consider cutaneous T-cell lymphoma/Sezary syndrome

Atopic Dermatitis



Atopic Dermatitis





Severe Atopic Dermatitis
Cyclosporine + Dupilumab

Atopic Dermatitis: Biologic and HIV

DERMATOLOGIC THERAPY

SHORT PAPER

Safe and effective treatment of atopic dermatitis using dupilumab over 23 months in a patient with HIV

Michael Lor, Natalia Villa, Vanessa Holland

First published: 03 September 2020 https://doi.org/10.1111/dth.14271 | VIEW METRICS

<u>Dupilumab</u>: IL-4/13 inhibitor

Lebrikizumab: IL-13 inhibitor
Tralokinumab: IL-13 inhibitor

TABLE 2 Summary of HIV+ patients treated with dupilumab in the literature to date[4-6]

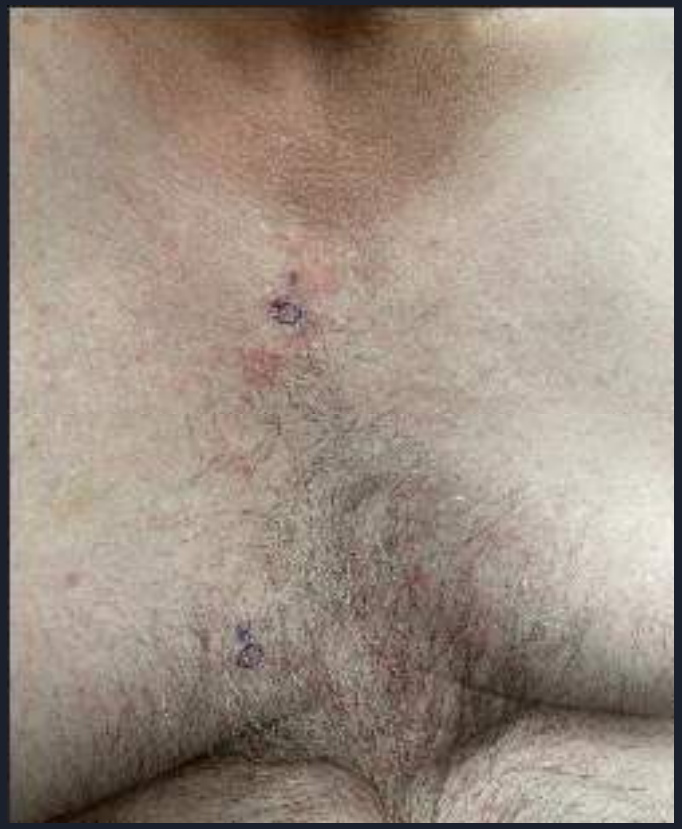
Patient number	1	2	3	4	5	6	7 (current patient)
Diagnosis	PN	PN	AD	AD	AD	AD	AD
Months of follow-up	9	6	4	4	4	15	23
Pre-dupilumab CD4 T cell count (cells μL^{-1})	229	1058	860	77	665	688	1026
CD4 T cell count during dupilumab therapy (cells μL^{-1})	188	1206	1012	92	860	738	905
Pre-dupilumab viral load (copies mL^{-1})	168	UND	UND	276 000	UND	UND	UND
Viral load during dupilumab therapy (copies mL^{-1})	UND	UND	UND	121 000	UND	UND	UND

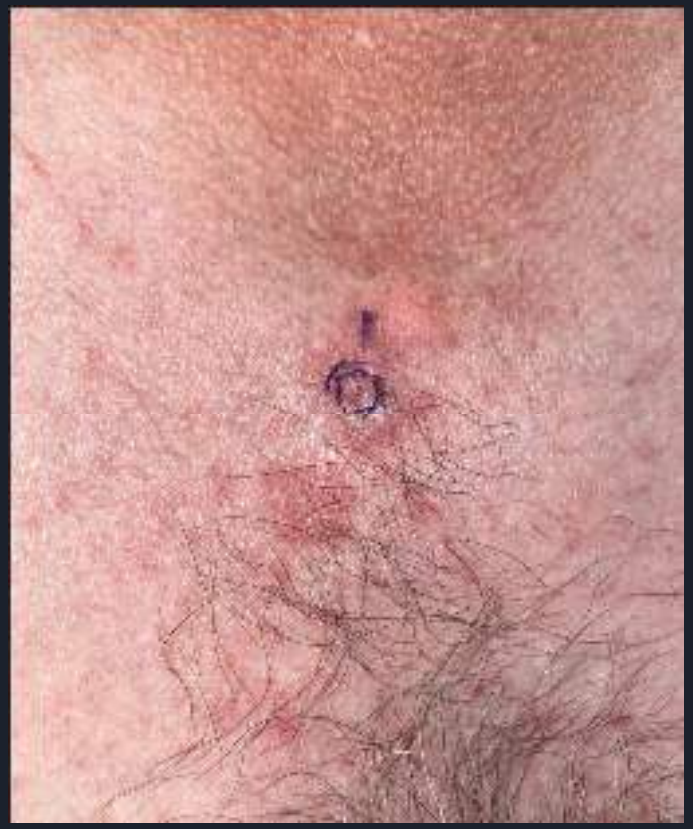
Abbreviations: AD, atopic dermatitis; HIV, human immunodeficiency virus; PN, prurigo nodularis; UND, undetectable.

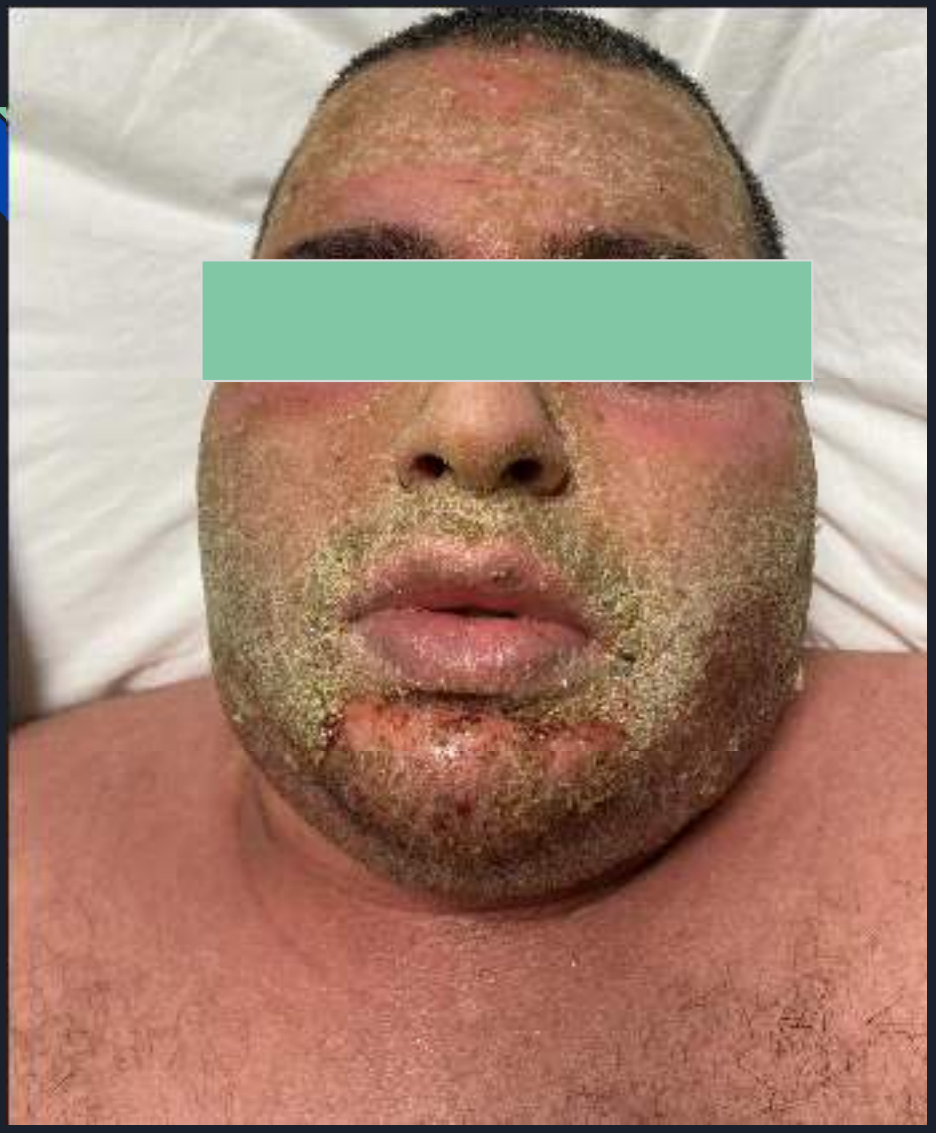
Seborrheic Dermatitis

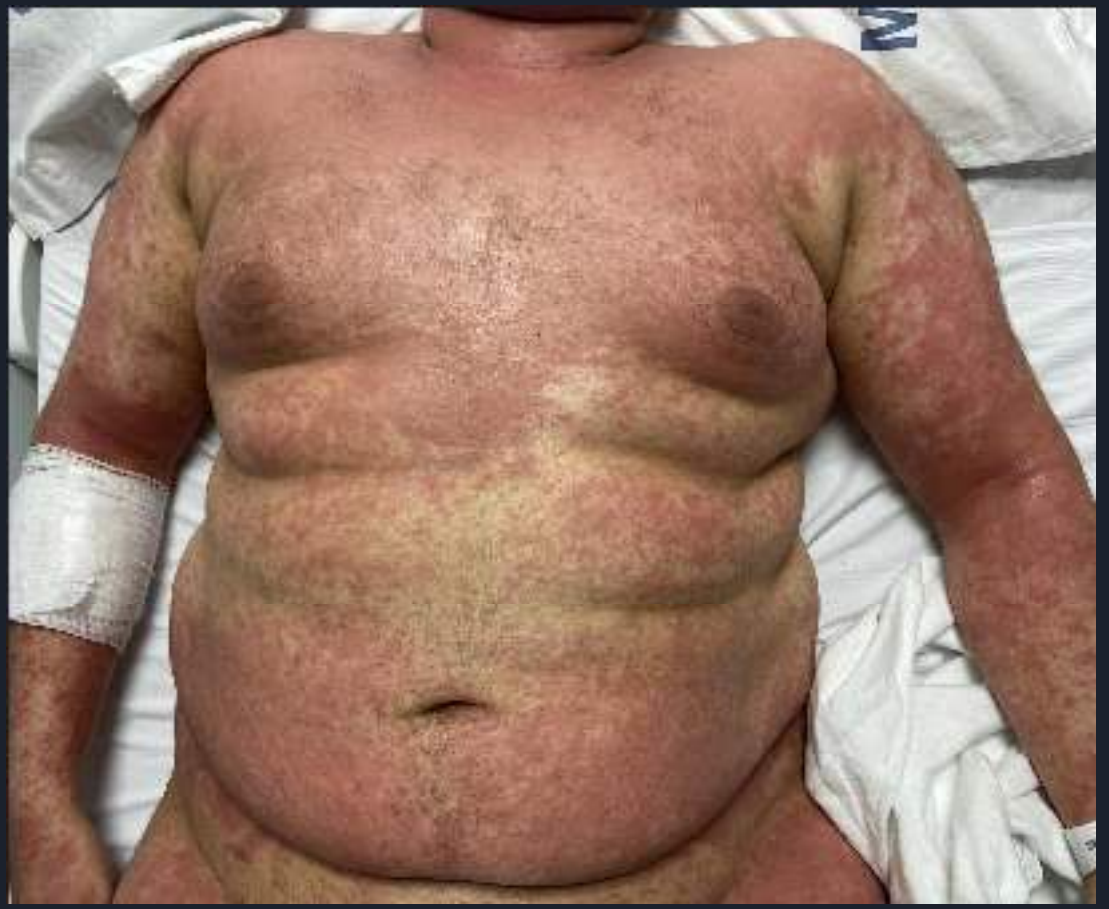
Background	Affects 40% of PLWH; up to 80% of AIDS patients 3% of the seronegative population Hypersensitivity reaction to *Pityrosporum* yeast
Clinical	Erythema and scaling of the central face, nasolabial folds, eyebrows, ears, and scalp; pigmentary changes (hypo and hyper)
PLWH	Worsens as the CD4+ counts decline
Diagnostics	Clinical
Management	Topical, scalp: fluocinolone scalp oil (apply to wet scalp before bed, wash off in the morning) Topical, face: ketoconazole cream twice daily Shampoo: ketoconazole 2%, salicylic acid (Neutrogena T/Sal shampoo) Oral: fluconazole tablets
Special consideration	Useful as a marker for HIV progression

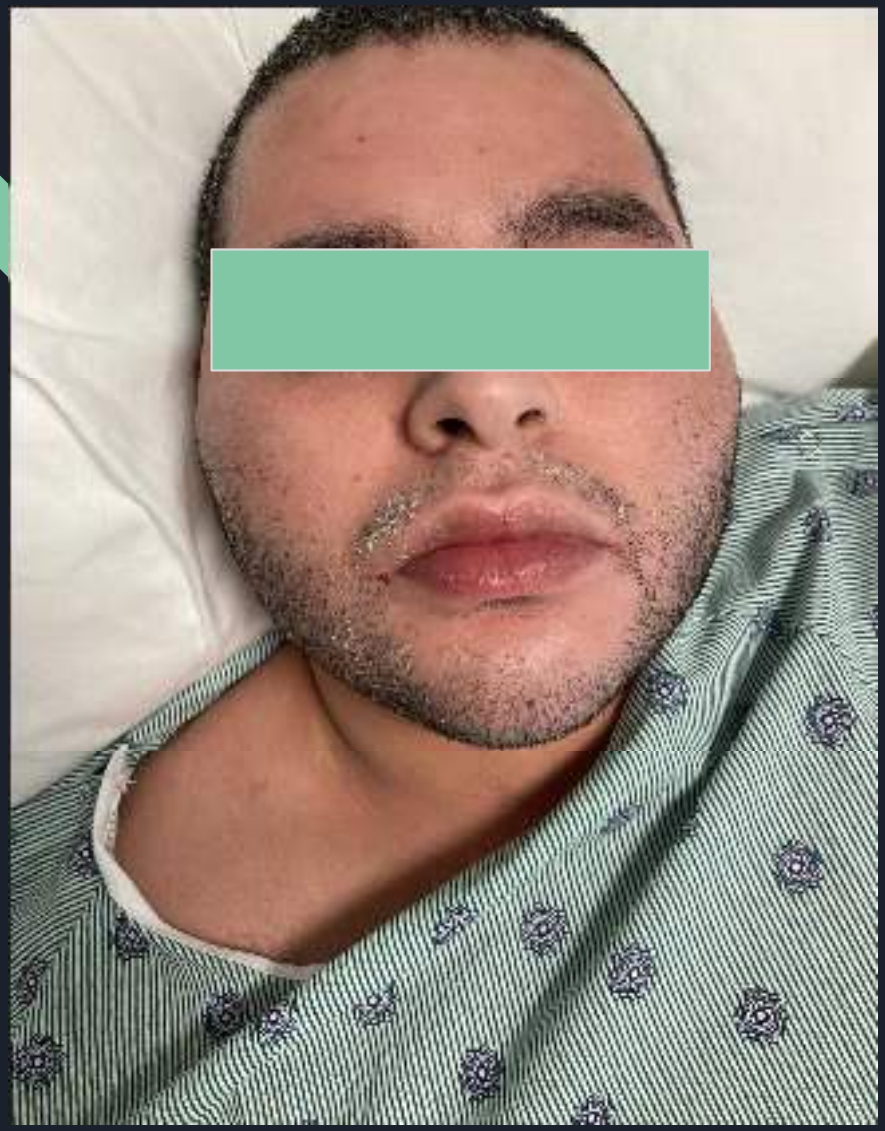
Seborrheic Dermatitis

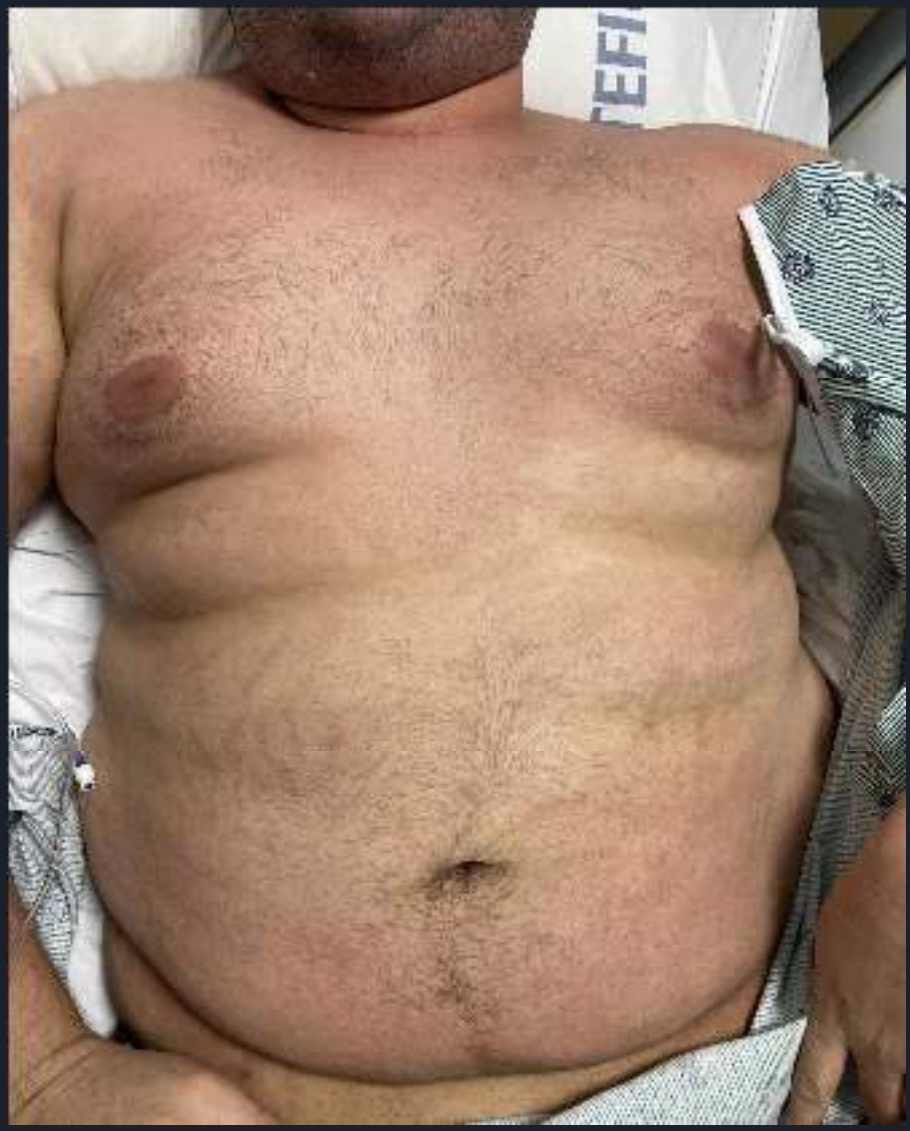












Infectious conditions

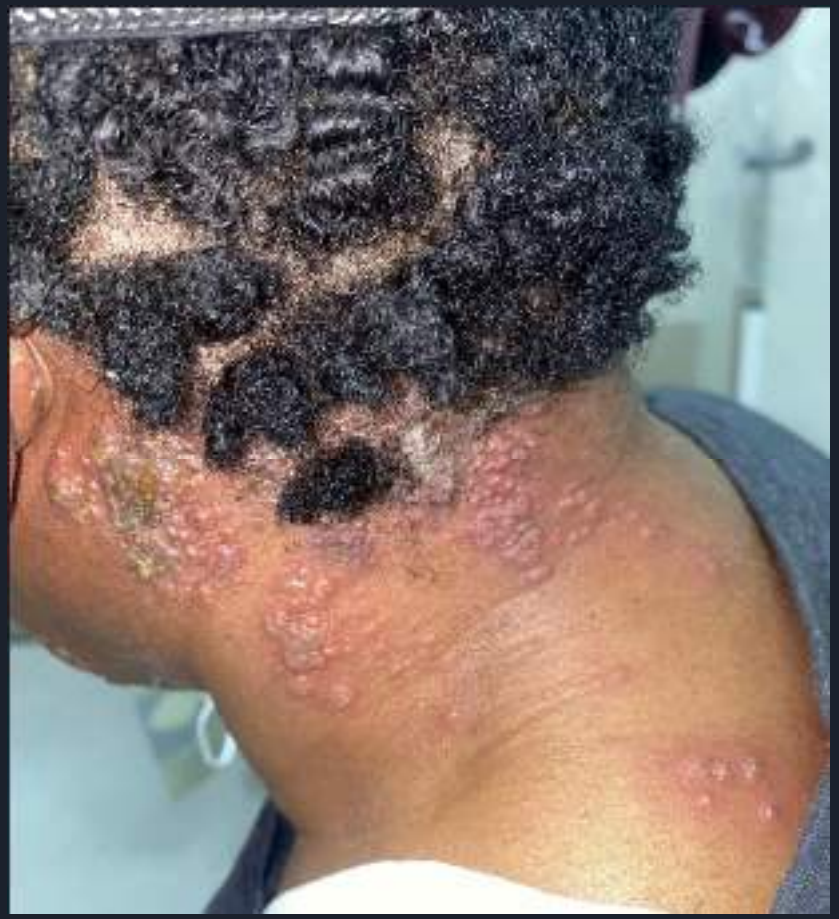
Viral (HSV, VZV, HPV, molluscum, Mpox)

Fungal/yeast (dermatophytes/tinea, onychomycosis)

Herpes Simplex (HSV-1 / HSV-2)

Background	HSV seroprevalence of >90% (reduce the stigma)! HSV-1 > HSV-2 → genital HSV infections
Clinical	Clustered vesicles on an erythematous base → painful erosions with ***scalloped borders***
PLWH	Verrucous and ulcerative subtypes
Diagnostics	Herpes viral polymerase chain reaction (PCR)
Management	Episodic treatment: valacyclovir 2 g once Suppressive therapy: valacyclovir 1 g daily
Special consideration	Safe sex counseling: HSV-2 incites 3-fold increase in HIV acquisition Acyclovir-resistant HSV → IV foscarnet or cidofovir

Herpes (Simplex + Zoster)



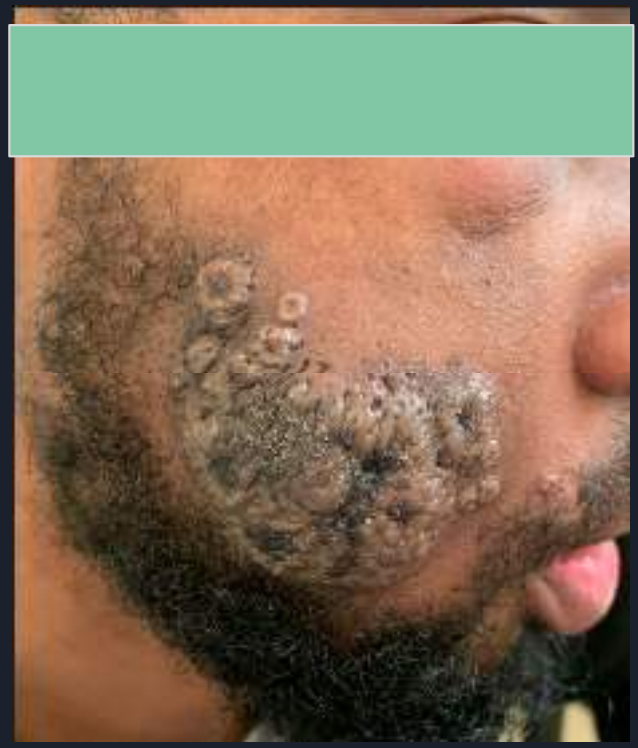
<u>Diagnostic Testing</u>

Serologies (HSV/VZV IgG) does not test for current/active infection

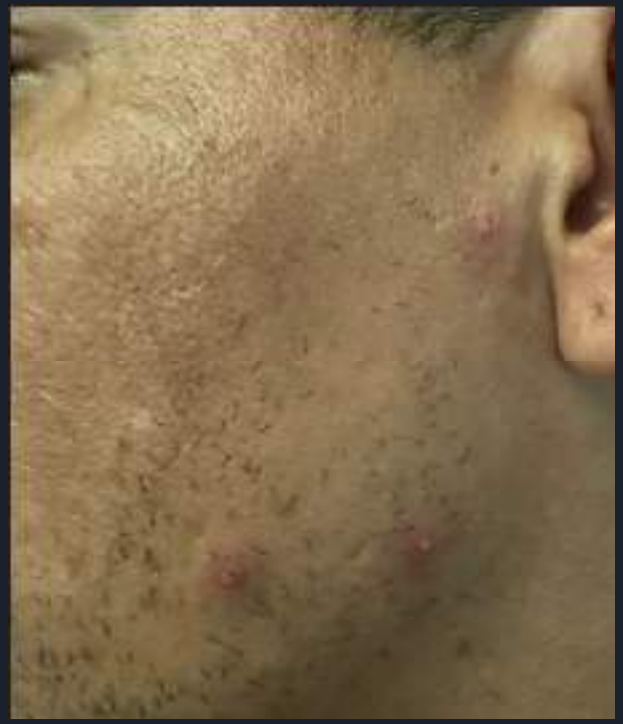
Gold standard confirmatory test: **<u>HSV/VZV PCR from lesion</u>**

1) Use red top viral swab
2) Break open a blister/vesicle and swab the lesion's base - include the fluid
Pearl: wet the tip of the swab with media fluid if the lesion is crusted

Viral Infections - Vesicles, Pustules, Ulcers



Mpox + HSV



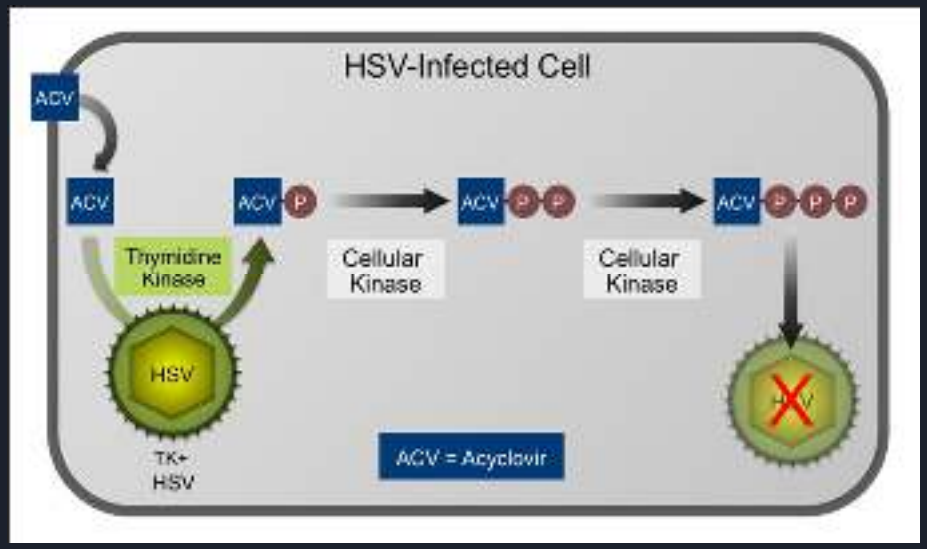
Mpox

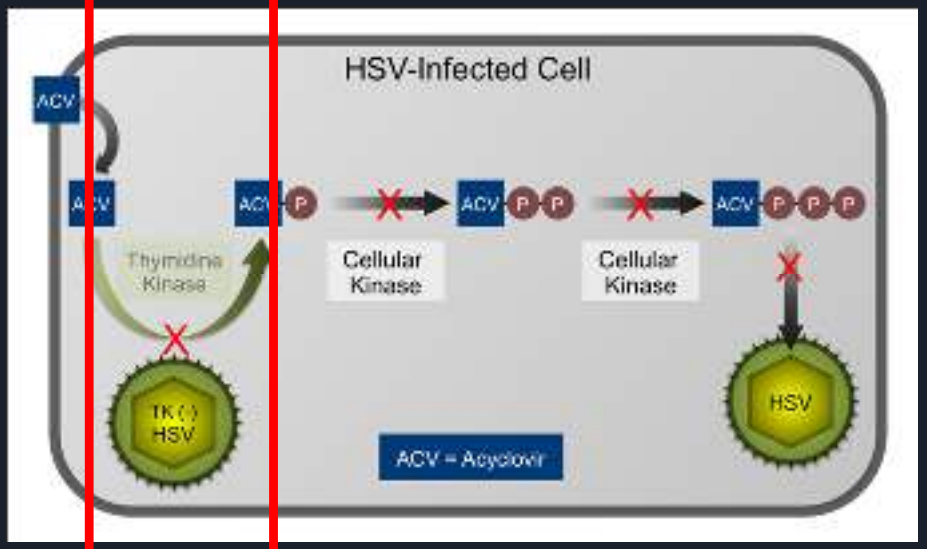
HSV

Acyclovir Resistance in HSV/VZV

Viral *thymidine kinase* mutation → NO drug activation

Preferred treatment: IV foscarnet





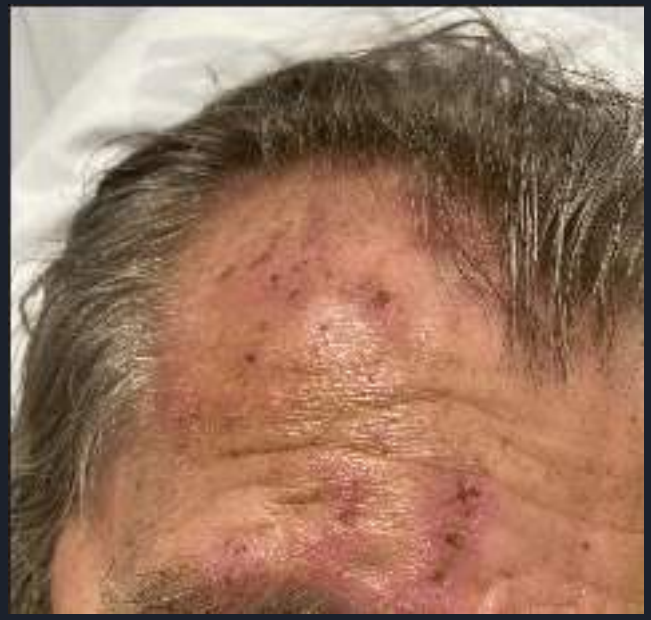
Verrucous HSV

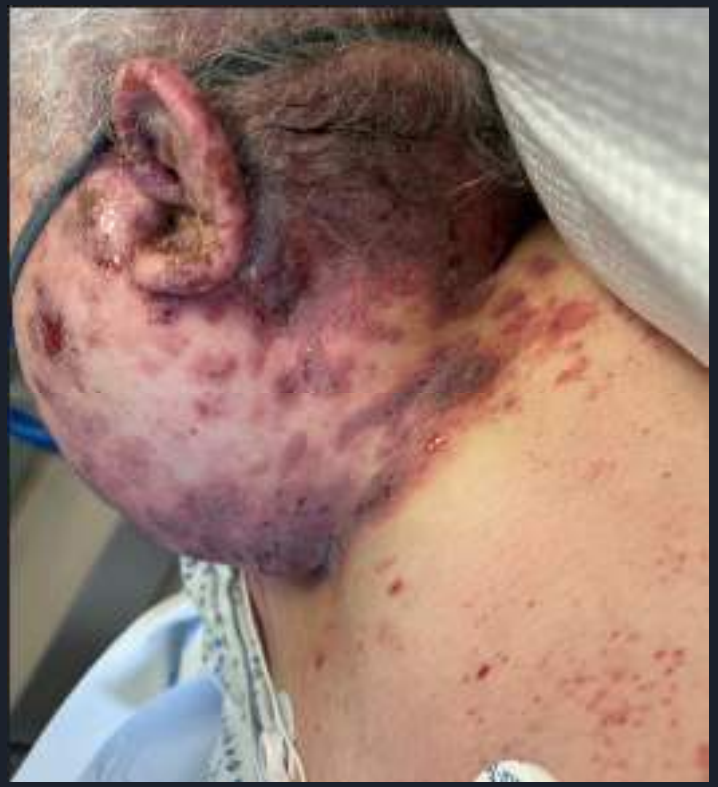
Ulcerative HSV

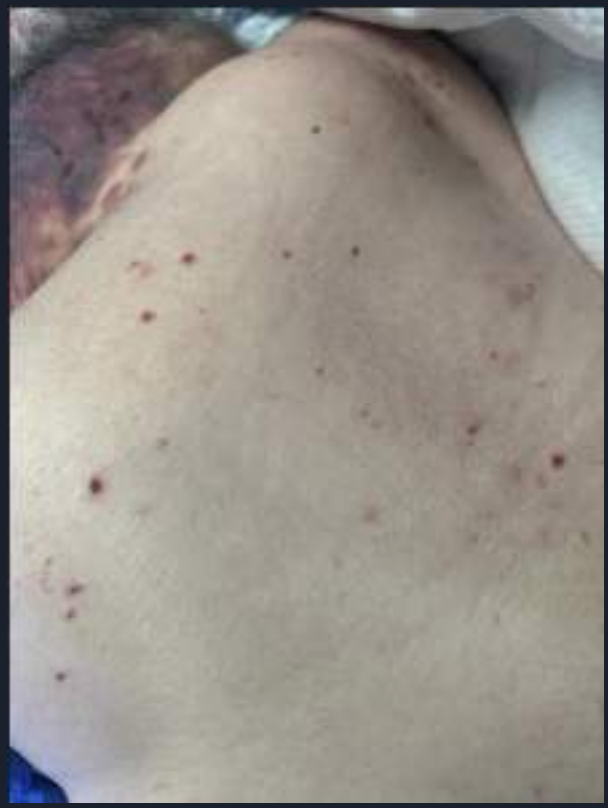
Varicella Zoster (VZV)

Background	Human herpesvirus 3 (HHV3), herpes zoster, disseminated zoster
Clinical	Grouped or confluent vesicles with **scalloped** borders Herpes zoster: confined to a dermatome and does not cross the midline Disseminated zoster: >20 vesicles outside of the primary and adjacent dermatomes
PLWH	Increased risk of disseminated; multidermatomal, necrotic, recurrent, hyperkeratotic, or ulcerative subtypes
Diagnostics	Varicella viral polymerase chain reaction (PCR)
Management	IV acyclovir, oral valacyclovir
Special consideration	Acyclovir-resistant VZV → IV foscarnet or cidofovir

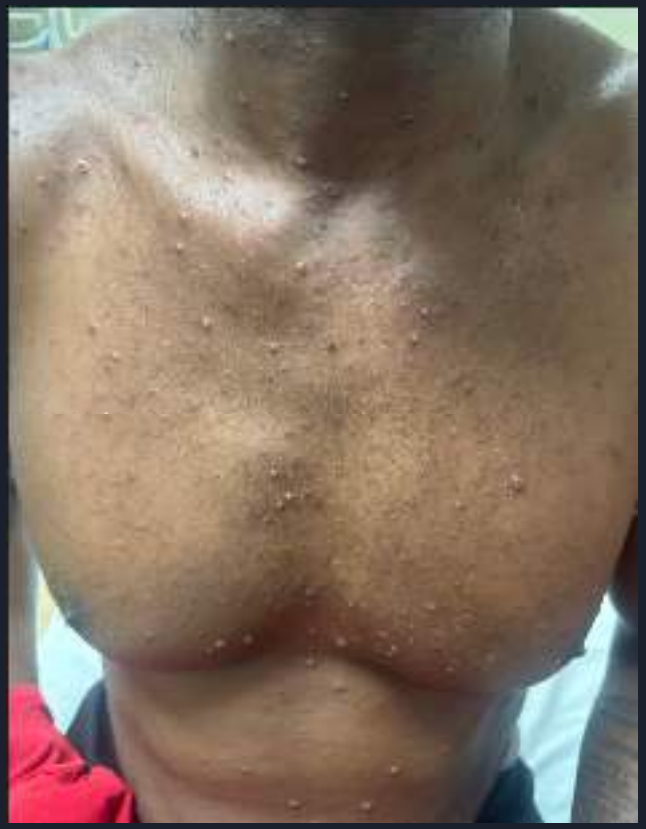
Herpes Zoster / VZV

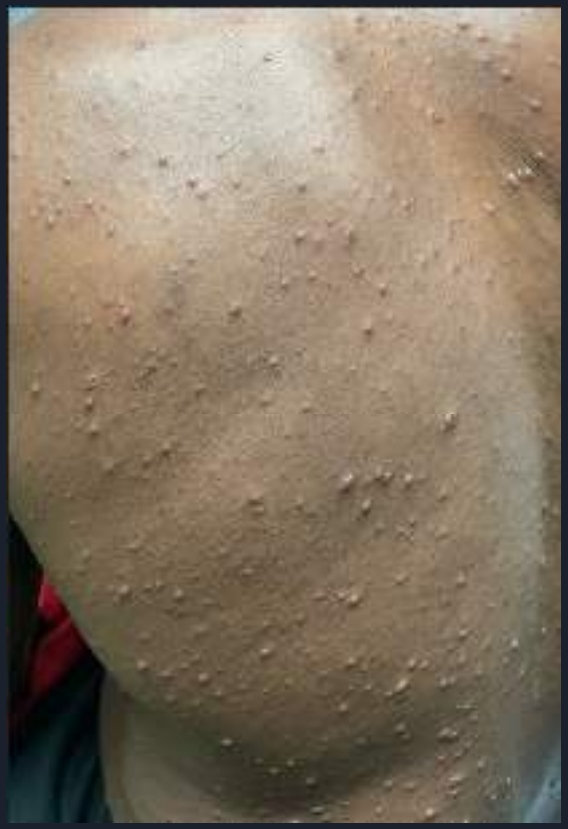






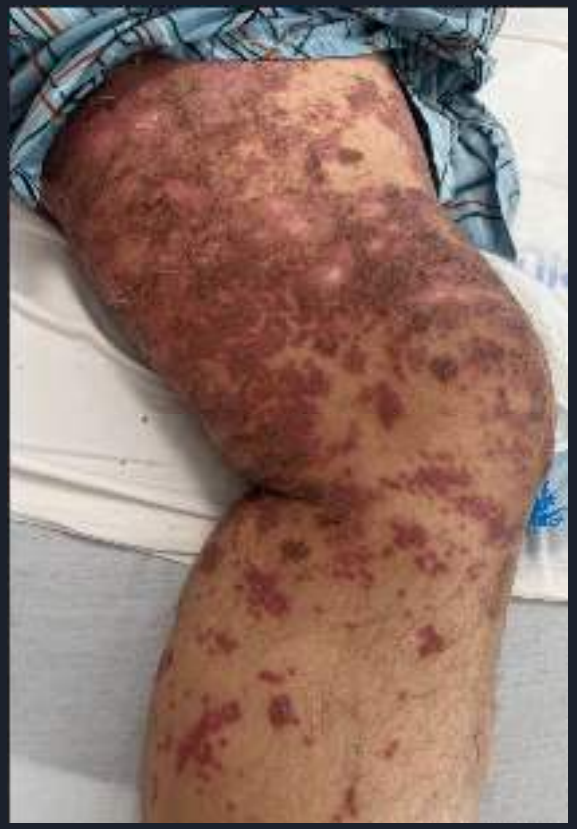
Primary Varicella





Giant VZV
Renal Transplant

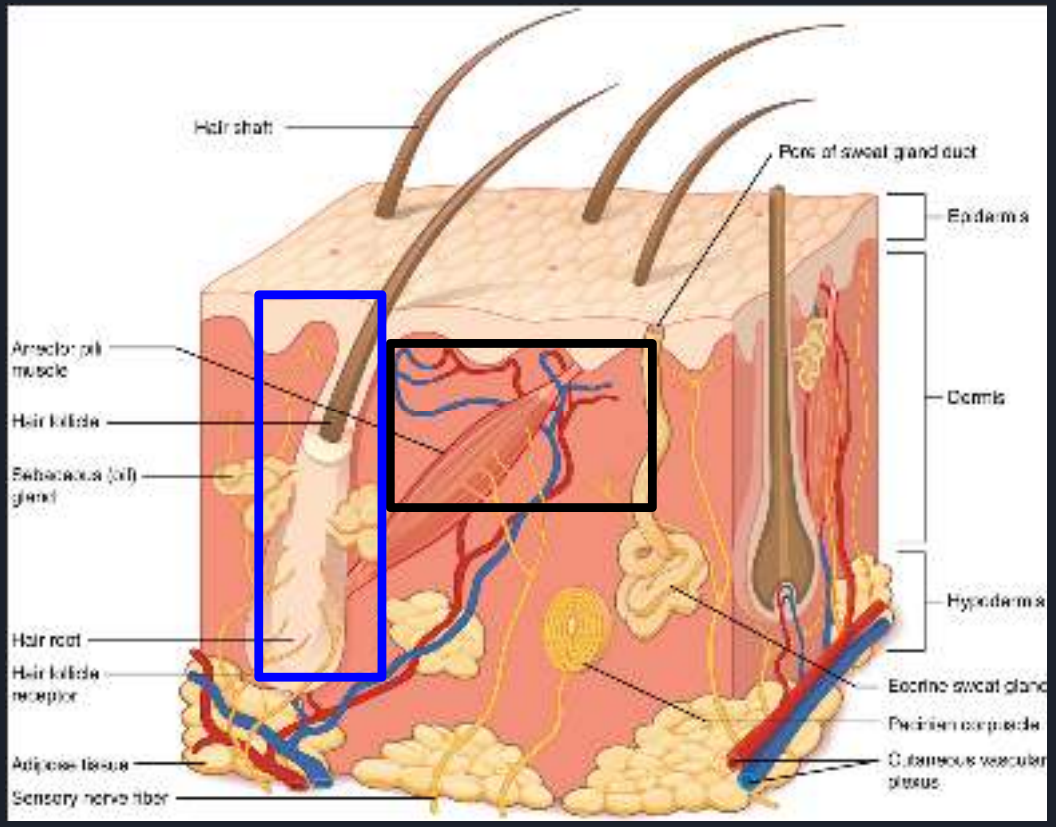
Purpuric Herpes Zoster



Purpuric Herpes

Blue box: herpes infecting hair follicle

Black box: adjacent blood vessels

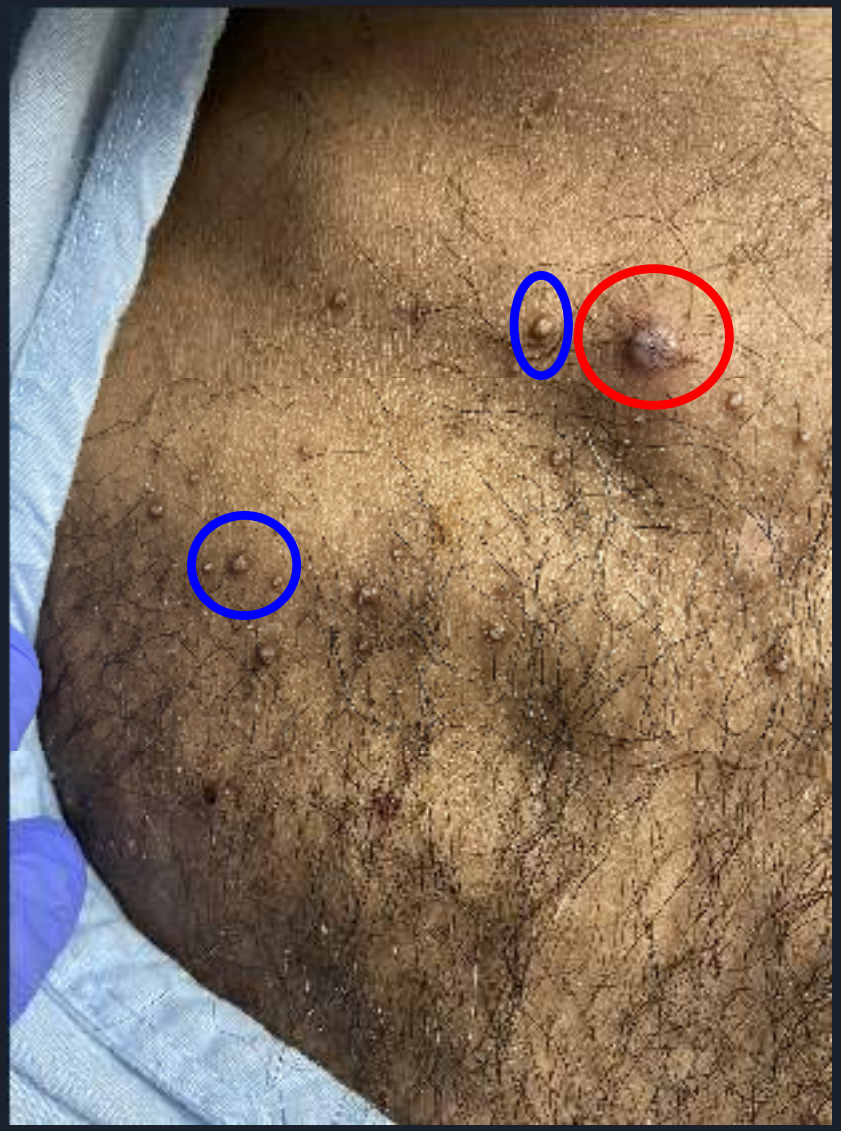


Human Papillomavirus (HPV)
Genital Warts / Condyloma Acuminata

Background	HPV vaccination rates remain low despite expanded indication to age 45 6.2 million new HPV infections annually HPV 6 and 11 most common; coinfection with high-risk strains 16 and 18
Clinical	Single or multiple flesh-colored verrucous papules and plaques
PLWH	Transformation to SCC
Diagnostics	Clinical; biopsy if considering squamous cell carcinoma
Management	Destruction (cryotherapy, trichloroacetic acid, surgery) Topical (imiquimod, cidofovir) HPV vaccination!
Special consideration	Screen for additional STIs

Molluscum Contagiosum (MC)

Background	Molluscipoxvirus
Clinical	Umbilicated, single to multiple yellow to white papules 3-5 mm in diameter
PLWH	May become large (<100 CD4+ cells) Lesions >10 mm in diameter
Diagnostics	Clinical
Management	Observation; cryotherapy; topicals (tretinoin, berdazimer 10.3% gel, cidofovir 0.3 or 3% gel)
Special consideration	Severity of infection inversely related to CD4+ count



Herpes

Molluscum

Mpox

Background	*Orthopoxvirus* similar to smallpox; clade IIb in the 2022 global outbreak Primarily in MSM or anyone in close/personal contact
Clinical	Incubation period of 7-14 days; +/- preceding systemic symptoms Proctitis/anorectal pain; oropharyngeal, ocular lesions <10 papules, vesicles, pustules, or ulcers affecting genitals or perianal region Generalized exanthematous eruption in those with systemic manifestations (mimic viral/syphilis)
PLWH	Advanced or inadequately treated HIV: risk for severe and prolonged illness and death
Diagnostics	PCR from lesions Consider mpox even if other tests are positive (other STIs, HSV/VZV)
Management	Vaccinia vaccination protective against mpox (2-dose JYNNEOS); not indicated in people who recovered from mpox infections PEP: best if given b/w 4-14 days after exposure (reduces sxs but not dz prevention); best if given within 4 days of exposure Supportive care Tecovirimat: did not reduce time to resolution of mpox lesions
Special consideration	Severe cases: extracutaneous effects (pulm, neurologic, cardiac, ocular and urologic complications)

JOURNAL OF
MEDICAL VIROLOGY

LETTER TO THE EDITOR

Distinguishing monkeypox from its mimickers

Grace Torres, Michele Tosur, Uros Kravos, Benedikt Wu

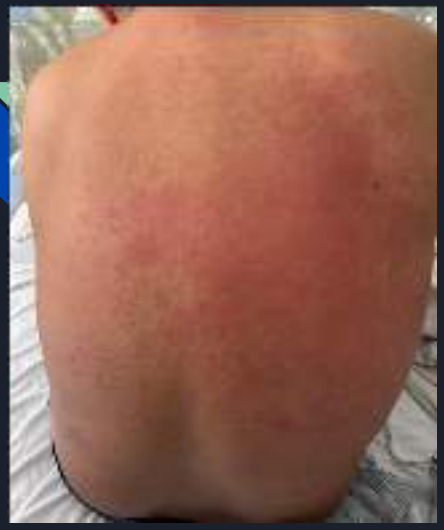
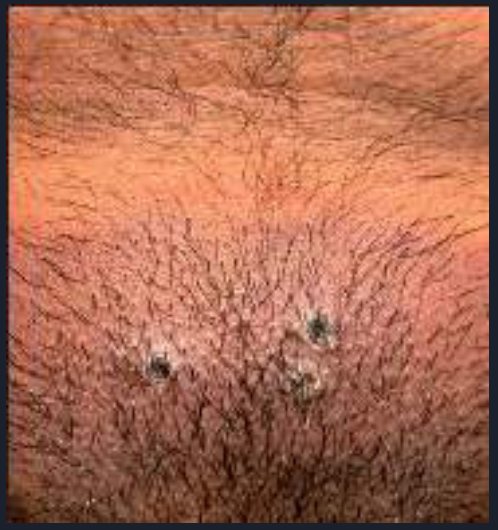
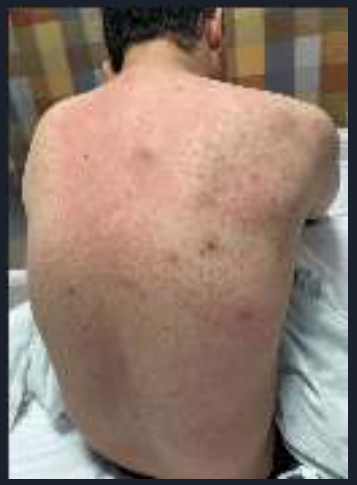
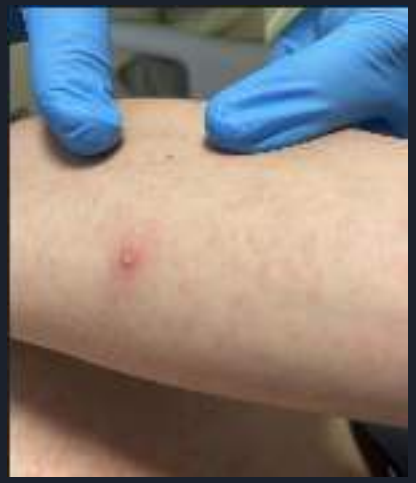
First published: 25 January 2023 https://doi.org/10.1002/jmv.28533

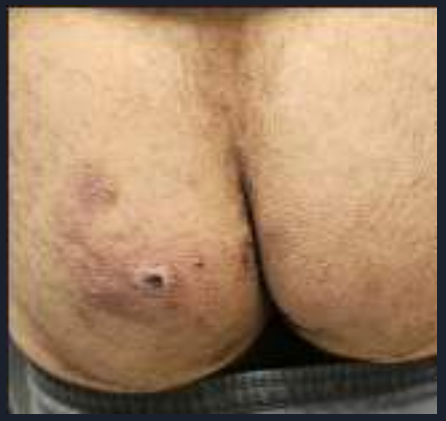
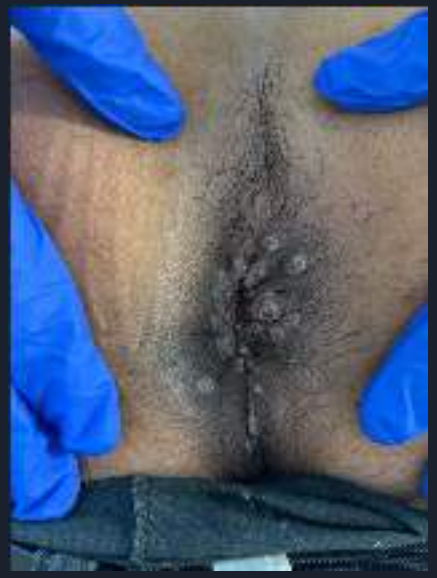
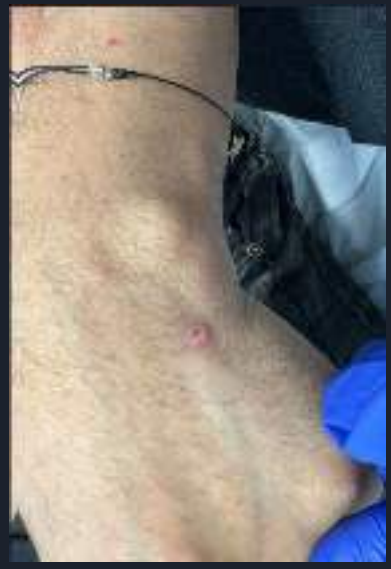
TABLE 1 Infectious diseases that present with fever and vesicular pustules

Disease (organism)	Typical population affected	Route of transmission	Cutaneous symptoms and morphology and distribution of lesions	Systemic symptoms	Notable diagnostic and confirmatory tests
Monkeypox (Monkeypox virus)	Men who have sex with men; HIV positive individuals	Close skin to skin contact; large respiratory droplets	• Painful, penile lesions • Polymorphic, 1–2 cm firm, vesicles or pustules with deep central umbilication surrounded by erythematous halo Centrifugal distribution, Crusthorn and Eusthorn, predilection for acrogenital regions	Malaise, myalgia, lymphadenopathy Rare respiratory symptoms	PCR from specimens, electron microscopy, immunohistochemistry from skin biopsy, serum antibody testing
Varicella (chickenpox) (human herpes virus 3 [VZV]; human alphaherpesvirus 3)	Children and adults (in disease) Elderly, immune-compromised herpes zoster	Respiratory droplets, direct contact	• Painful, penile lesions Polymorphic 2–4 mm lesions in various stages of progression (i.e., "dew drops on a rose petal") • Crusthorn, Eusthorn trunk proximal extremities, face, scalp/oropharynx • Monomorphic, diffuse 2–4 mm uniform umbilicated vesicles (chicken pox) human zoster)	Malaise Rare: hepatitis, pneumonia, encephalitis	PCR from vesicular fluid Tzanck preparation, DFA of skin scraping, viral culture, serum antibody testing
Disseminated herpes simplex (human herpesvirus 1)	Immune-compromised; underlying skin disorders	Direct contact, fomites	• Painful, penile lesions • Monomorphic, 2–4 mm umbilicated vesicles, and pustules on skin; hemorrhagic vesicles • Favors head, neck, upper trunk, upper extremities	Lymphadenopathy, meningitis, encephalitis, hepatitis	PCR, Tzanck preparation, DFA of scraping, viral culture from vesicular base, skin biopsy
Molluscum contagiosum (poxvirus molluscum virus)	Children, immunocompromised	Direct contact, skin to skin contact during sexual activity	• Asymptomatic or painful lesions Monomorphic, 2–6 mm dome shaped to umbilicated, pearly white to pink waxy papules and plaques Favors face, genitals	Asymptomatic	Tzanck smear, skin biopsy
Hand-foot-and-mouth disease (Coxsackie A16, A6 and enterovirus 71)	Children, immunocompromised	Fecal-oral, fomites, droplets	• Asymptomatic or painful, penile lesions • Monomorphic, 2–4 mm gray elliptical vesicles with surrounding erythema • Favors palms, soles, oral cavity, buttocks	Nausea/vomiting, diarrhea Rarely: encephalitis, myocarditis, pneumonitis	PCR from vesicular or nasopharyngeal swab and culture from vesicular fluid or stool specimen; serum antibody testing

Note: The clinical characteristics and diagnostic tests for monkeypox as well as its mimickers are listed here.

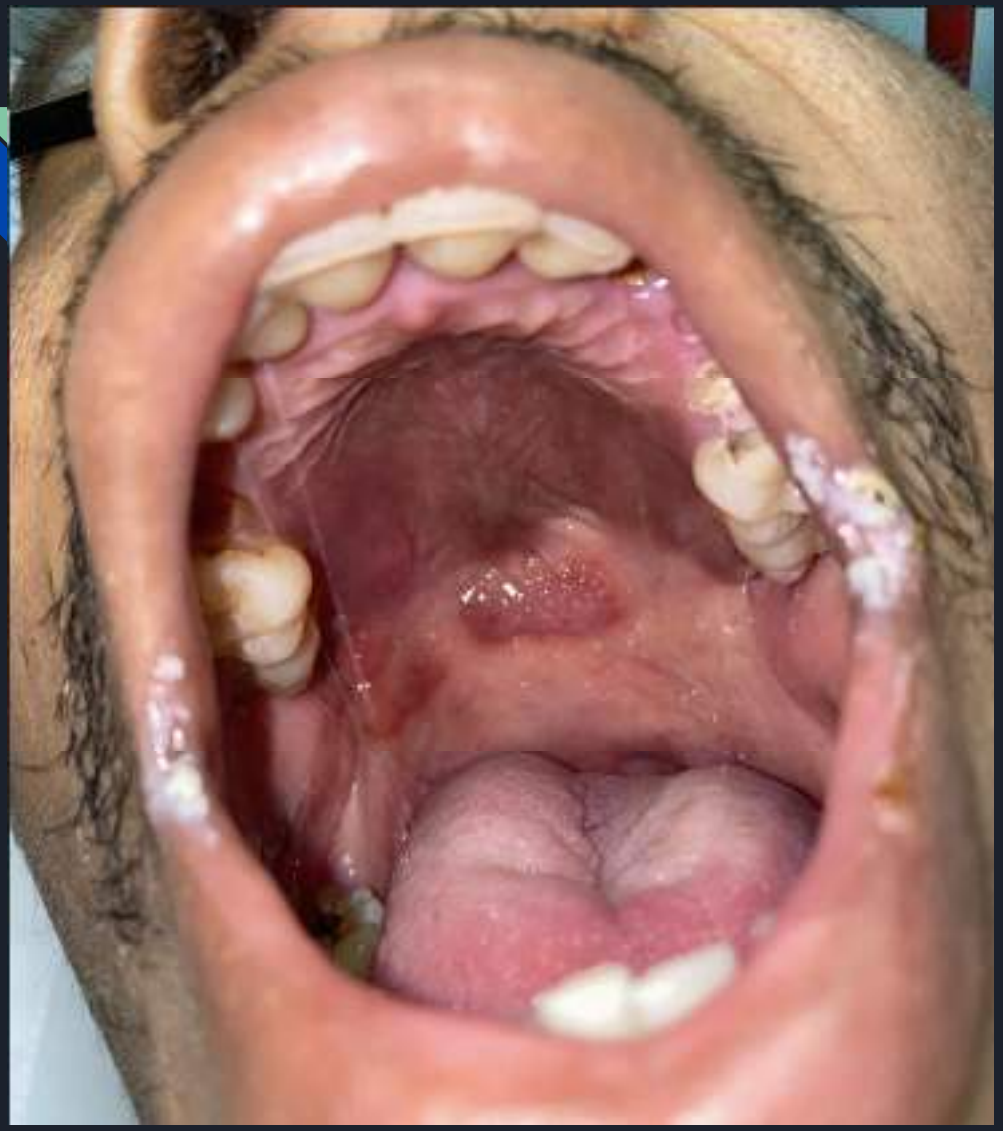
Abbreviations: DFA, direct fluorescent assays; EIA, enzyme immunoassay; NAAT, nucleic acid amplification test; PCR, polymerase chain reaction; RPR, rapid plasma reagin; VDRL, venereal disease research laboratory; VZV, varicella zoster virus.

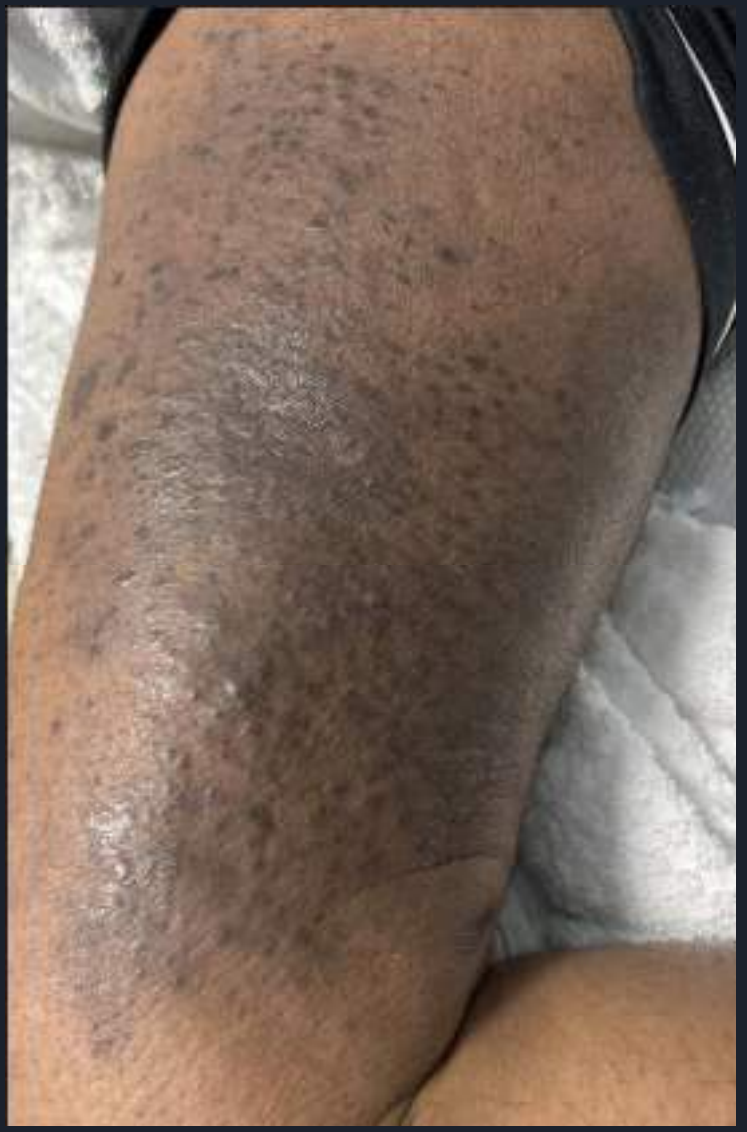





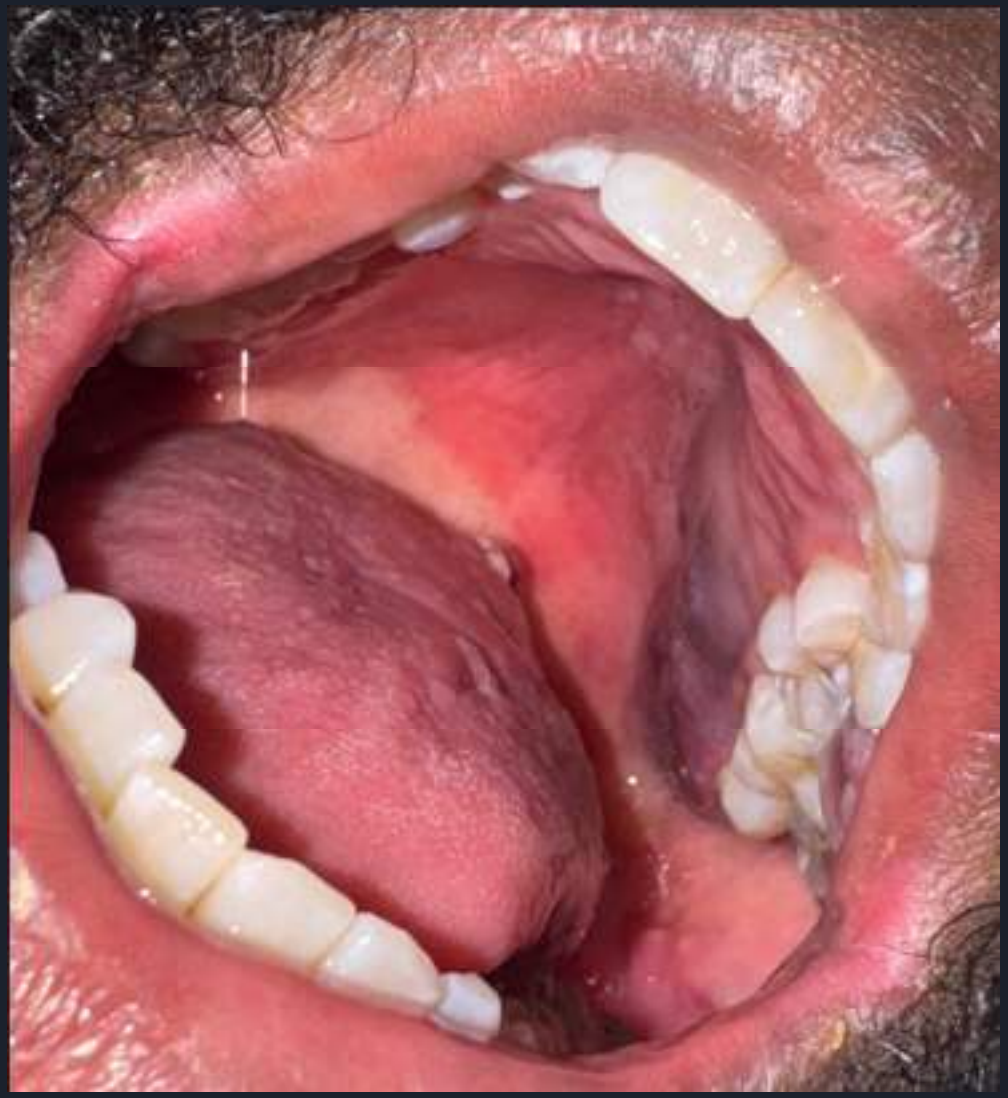




Kaposi Sarcoma (KS)

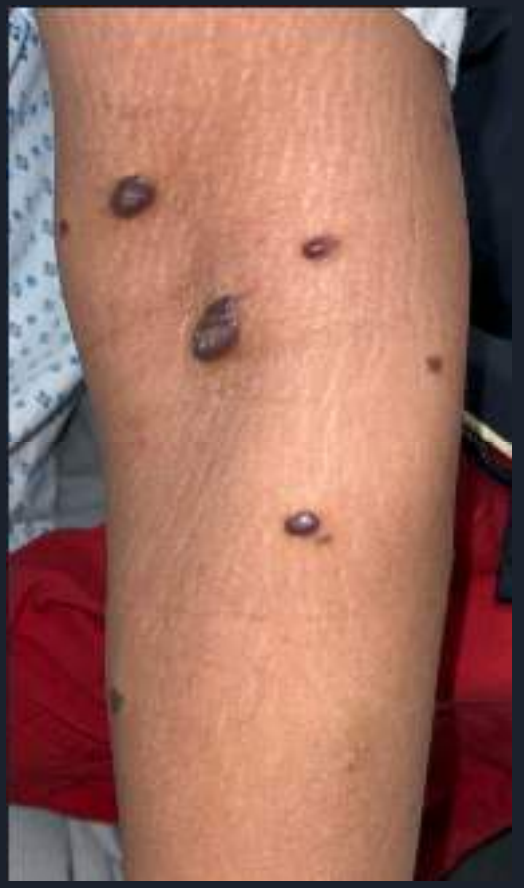
Background	Malignant neoplasm from **lymphatic endothelial cells** Due to **HHV-8** AIDS-defining illness
Clinical	Deep red, maroon or purple patches, plaques, tumors and nodules Golden yellow to green color (bruise-like) **Local lymphedema**
PLWH	Trunk and central facial lesions
Diagnostics	Skin biopsy, bronchoscopy, endoscopy, ultrasound or CT scan (HSM)
Management	1st line: antiretroviral therapies Local therapies: cryotherapy, surgical excision; topicals: imiquimod, timolol, alitretinoin, intralesional bleomycin Systemic: chemotherapies, TKIs, proteasome inh, mAb VEGF inh bevacizumab
Special consideration	20% have visceral involvement → hemorrhage: GI, cardiac tamponade, pulmonary obstruction Oral KS ~ GI involvement → FOBT for GI blood loss KS-IRIS (incidence: 6-21%)

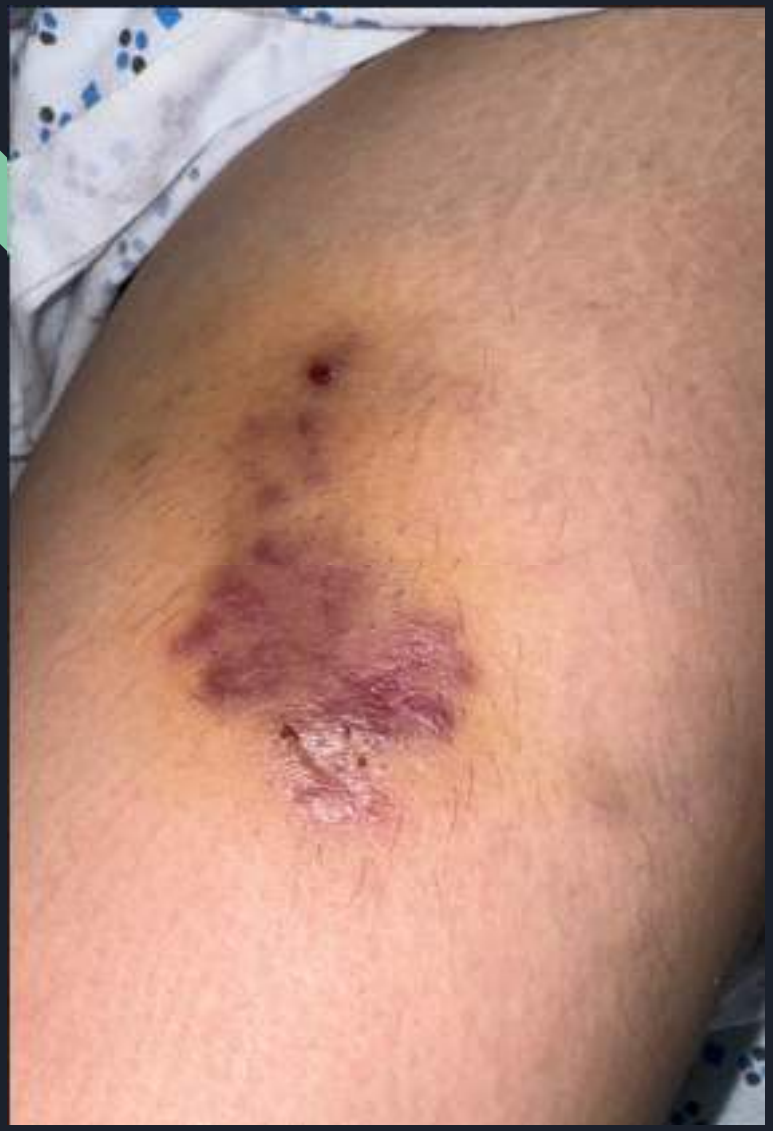


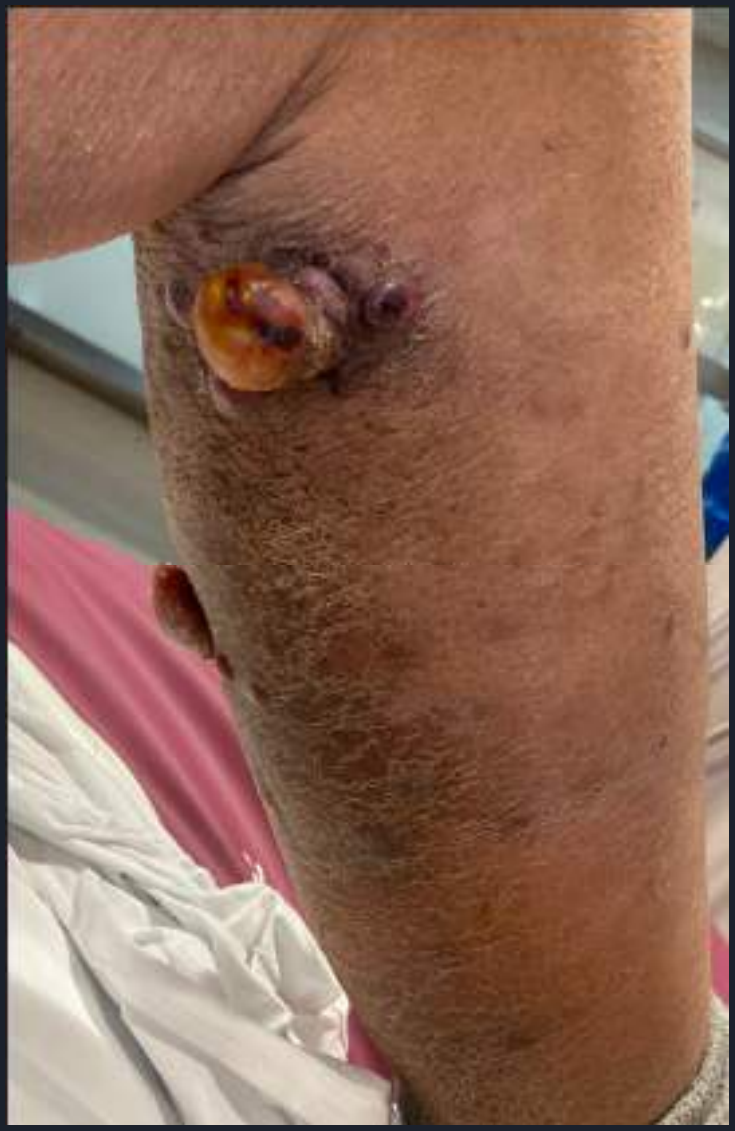


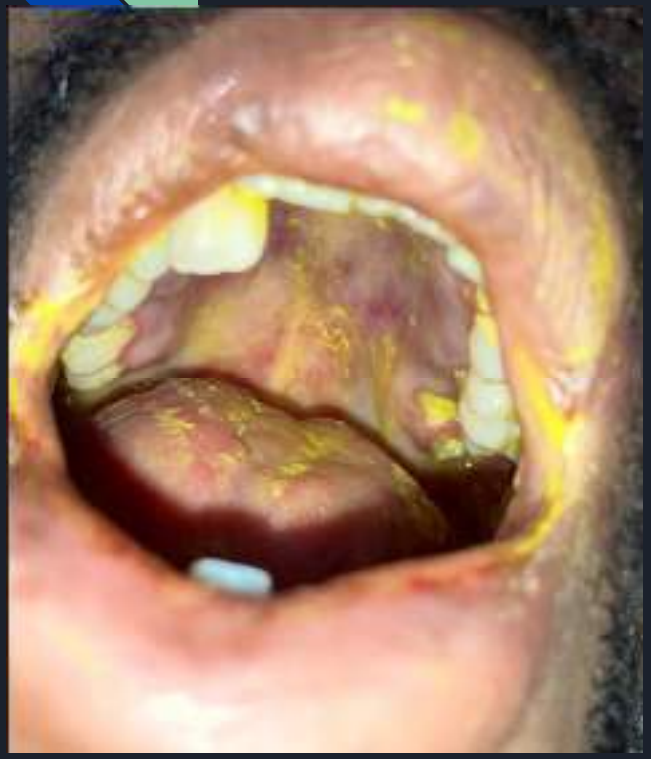


Keloid-like





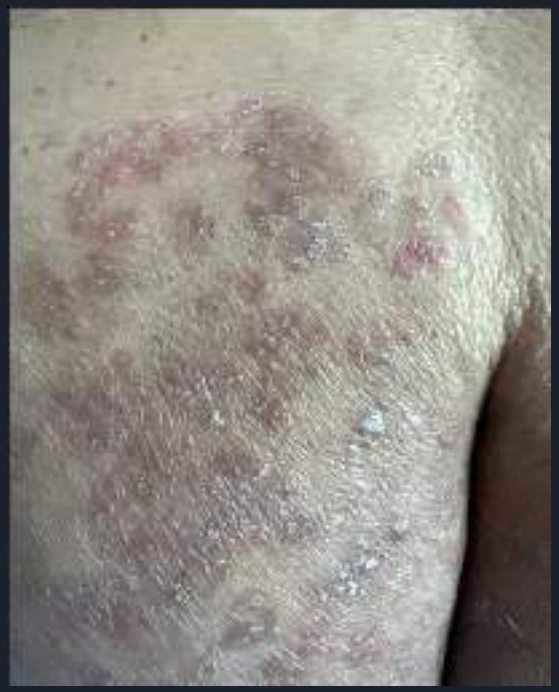


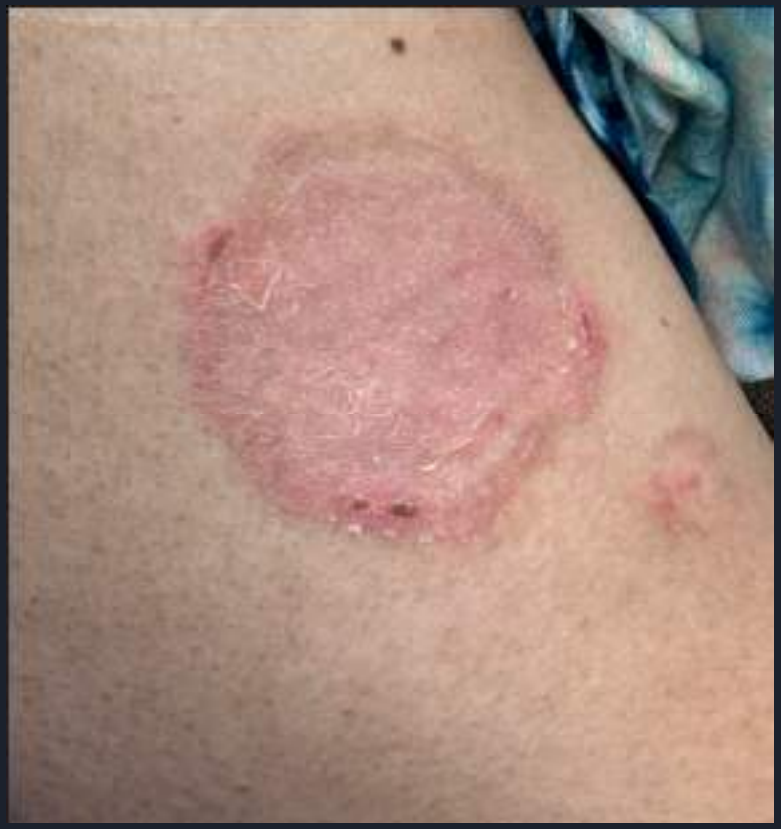


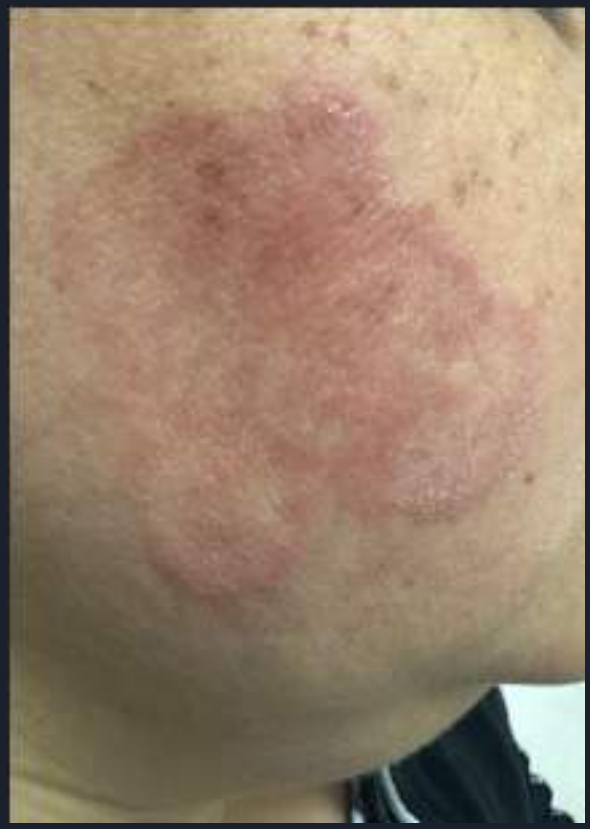
Dermatophytosis

Background	Causes tinea of the body and onychomycosis of the nails
Clinical	Annular red/pink/brown scaly plaques with expanding border and central clearing Can have papules, nodules, and crust
PLWH	Trichophyton mentagrophytes genotype VII: emerging strain spread through close contact/sexual contact
Diagnostics	KOH prep; fungal culture for speciation and sensitivities
Management	Topical allylamines (terbinafine, naftifine) Topical imidazoles (clotrimazole, ketoconazole) Oral terbinafine or itraconazole
Special consideration	When tinea infects the hair follicles → Majocchi granuloma

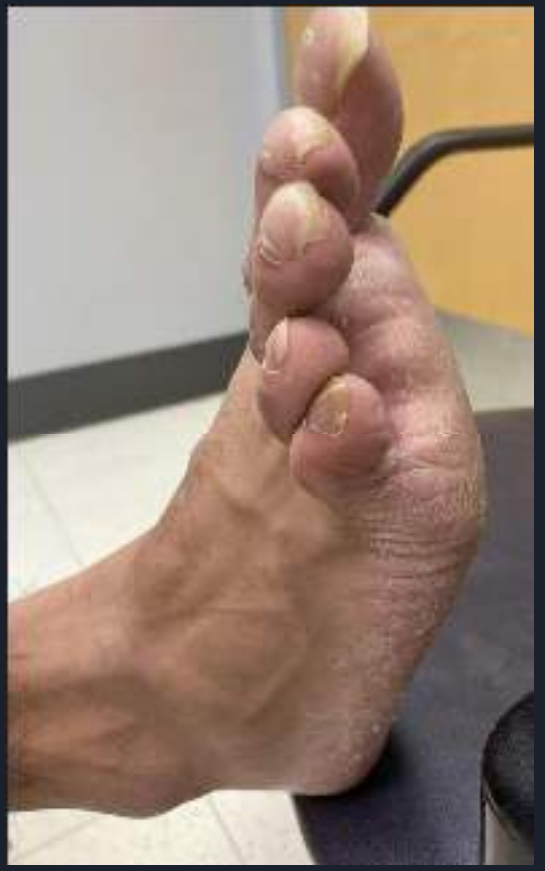
Tinea Infections



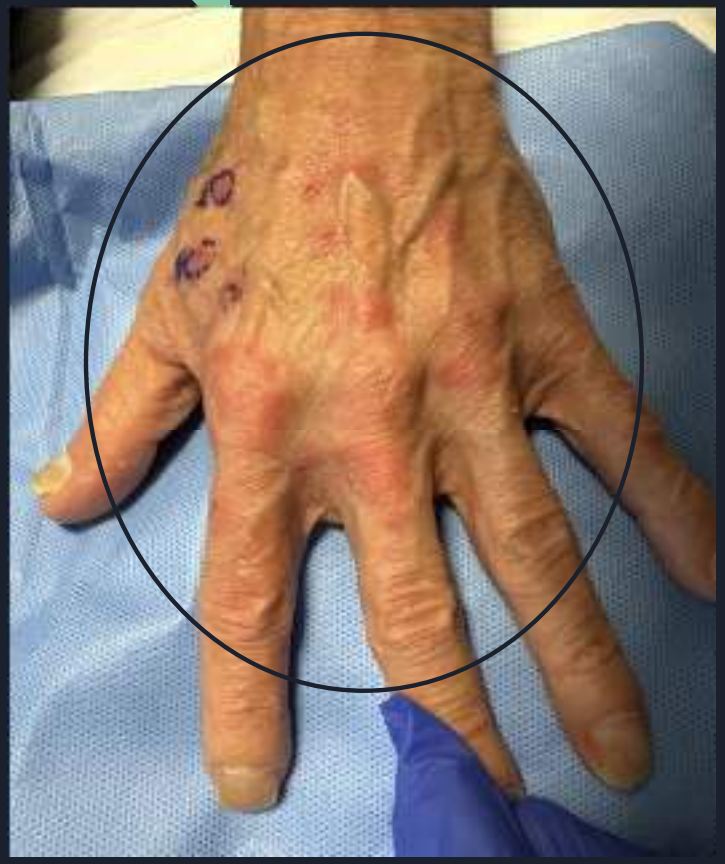


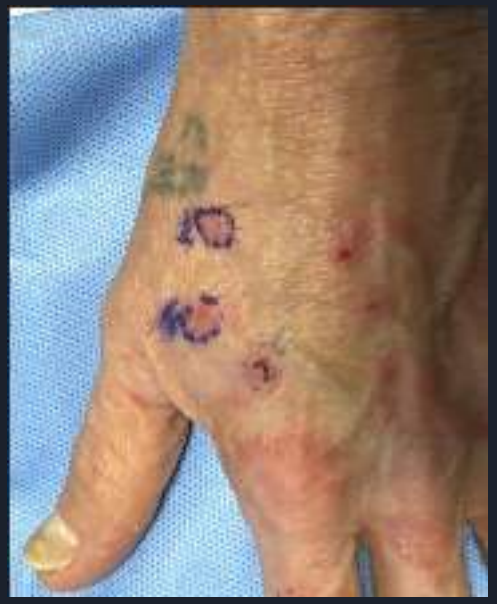


Referral: Nail Problems
2 Feet 1 Hand Syndrome

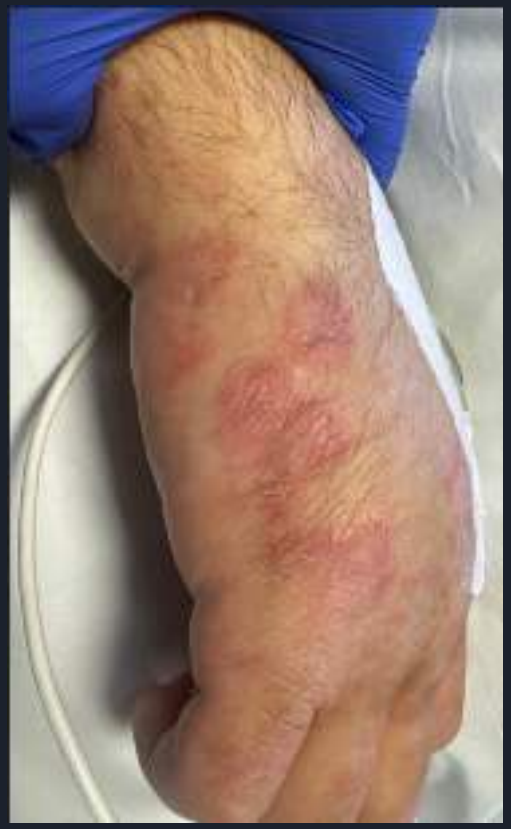


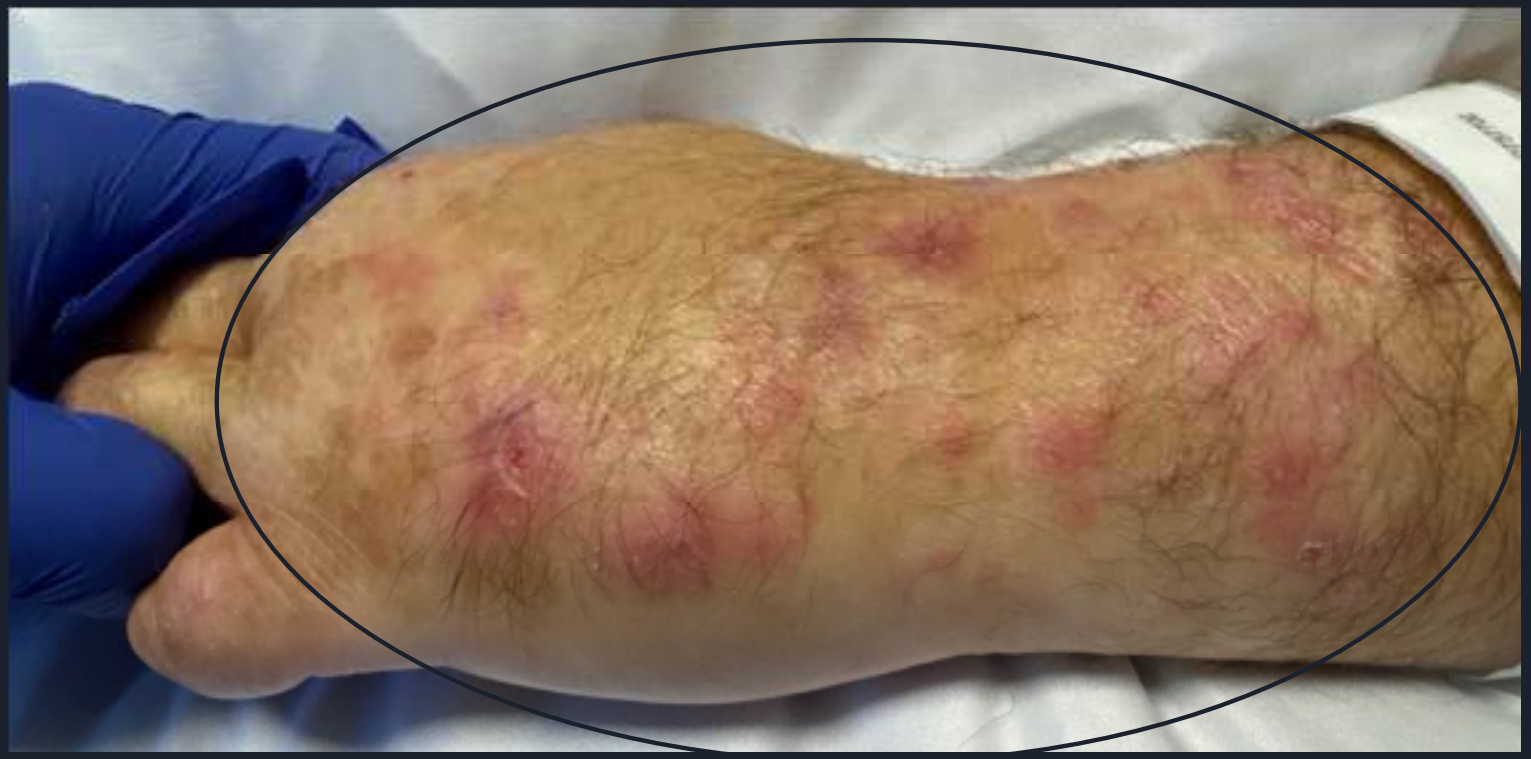
Majocchi Granuloma + VZV!

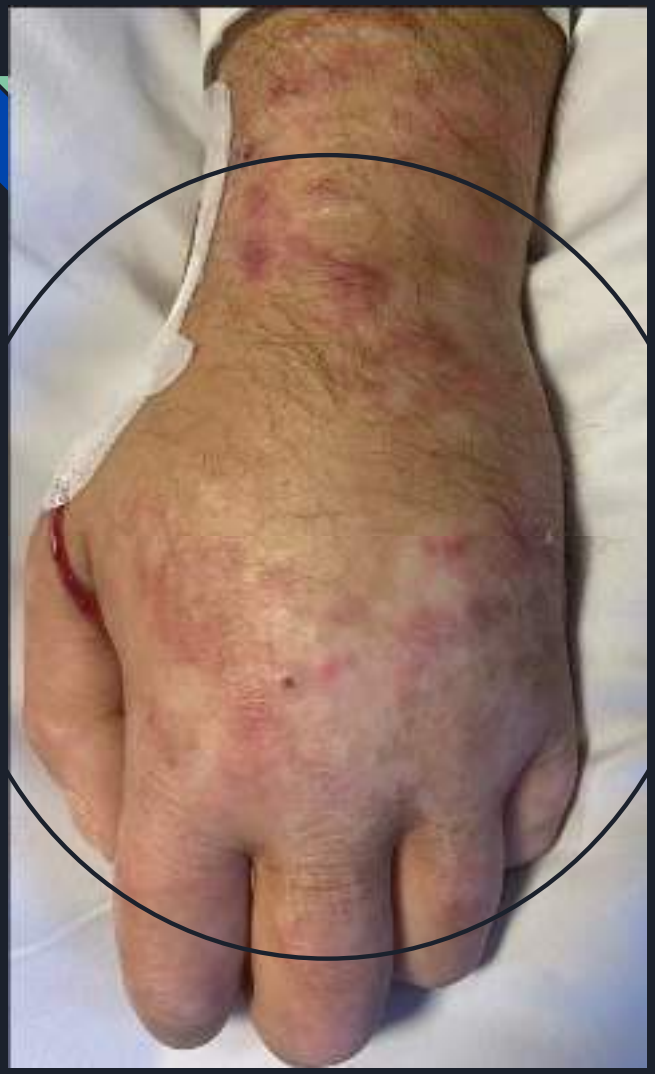


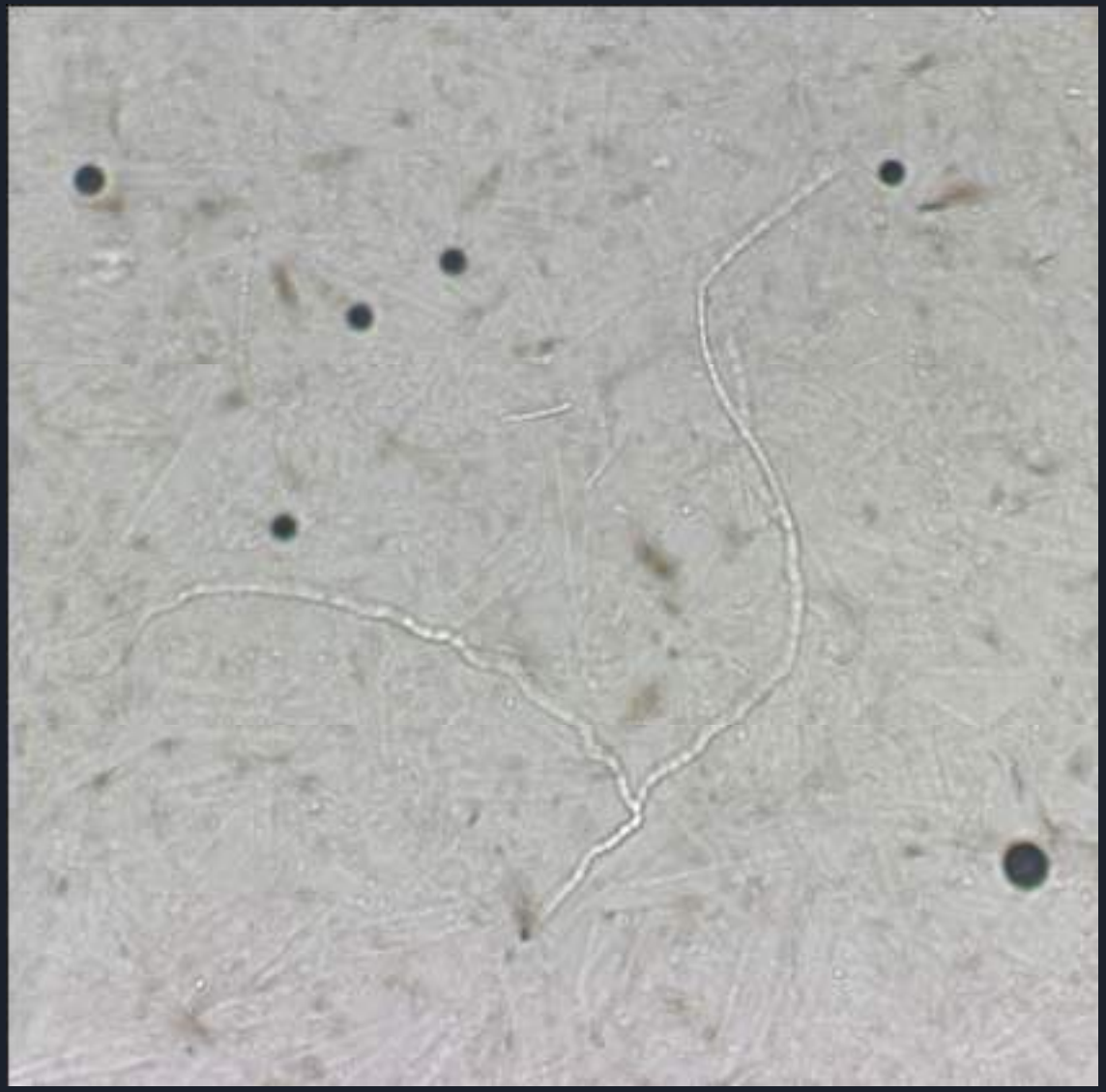


Majocchi Granuloma









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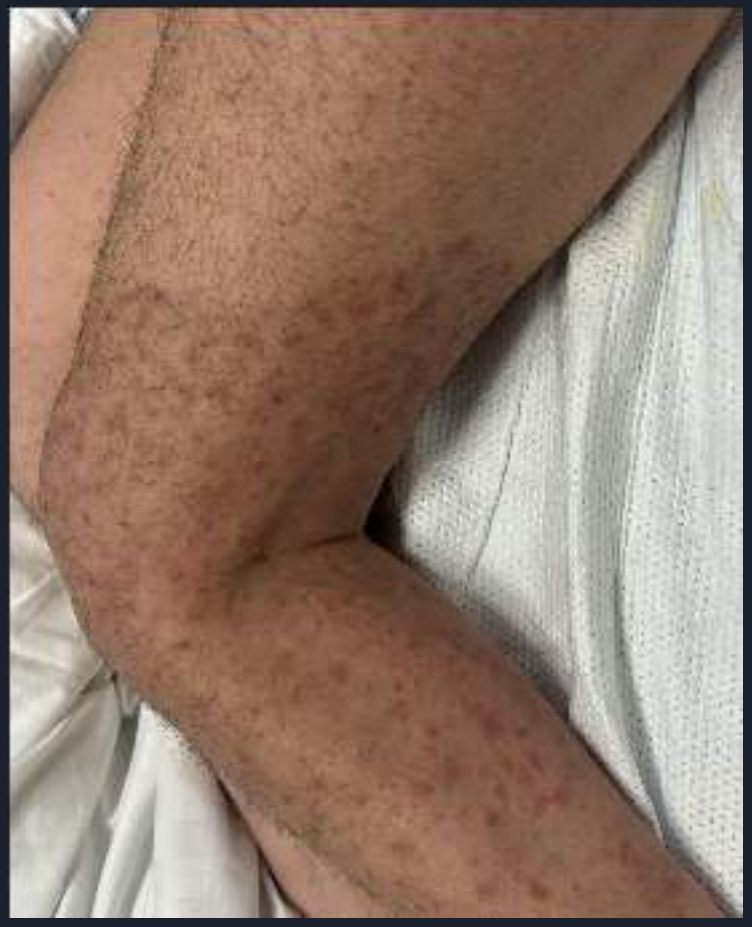
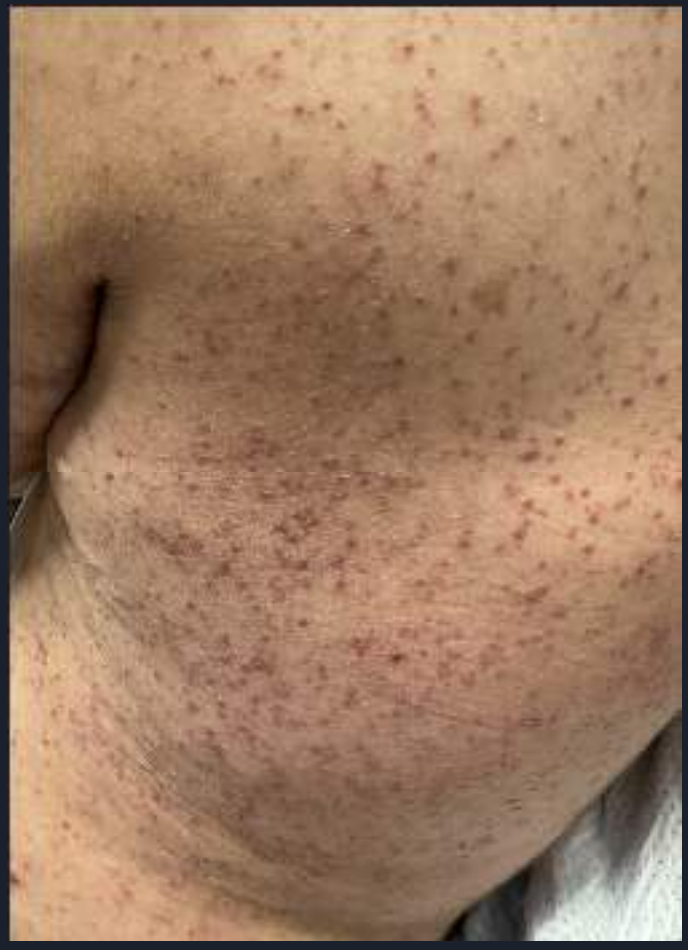
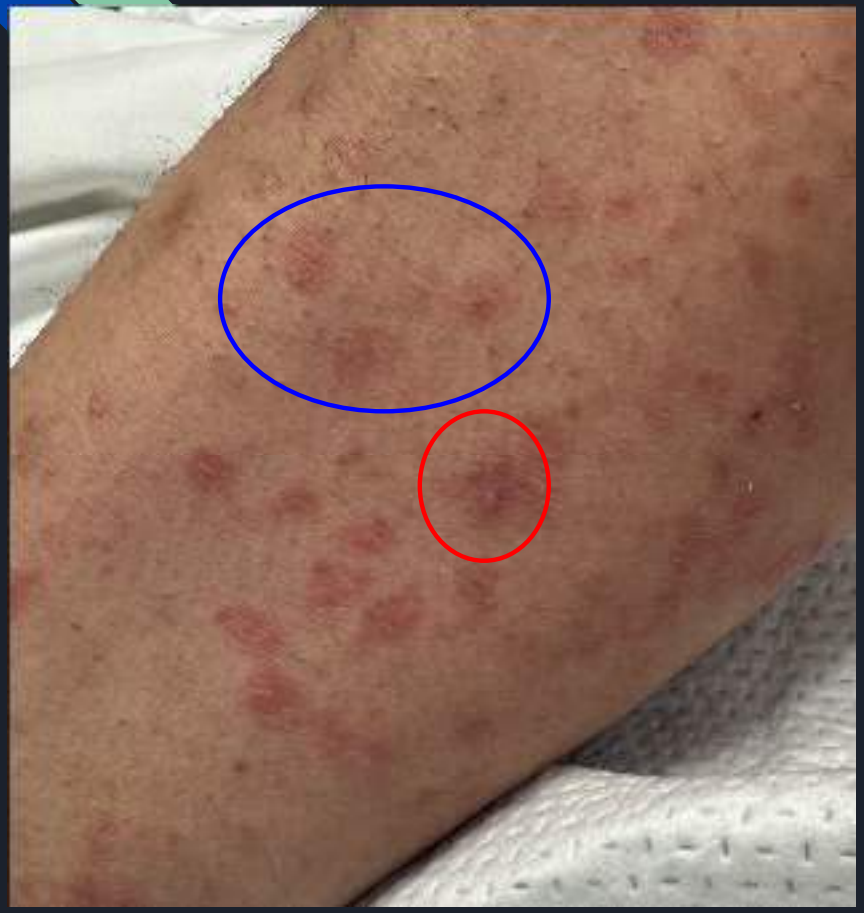
Majocchi Granuloma + ?





Majocchi Granuloma

VZV



Addendum
SURGICAL PATHOLOGY ADDENDUM 12/15/23

This report is issued to provide additional results/findings on this case. All contents in the original report remain otherwise the same.

- A PASD stain highlights fungal hyphae in the stratum corneum and budding yeast are also seen in the suppurative dermal inflammation, which could represent tinea corpora with Majocchi granuloma. This finding is seen in addition to the viral changes.
- No bacteria are seen on a gram stain.

Addendum signed at MOSES

Addendum electronically signed by Bijal Amin, MD on 12/15/2023 at 1200

Final Diagnosis

A. Skin, Right Thigh, Punch Biopsy:

- VIRAL VESICULAR DERMATITIS (HERPES SIMPLEX, ZOSTER, VARICELLA) AND SUPPURATIVE GRANULOMATOUS DERMATITIS SECONDARY TO A RUPTURED FOLLICULAR UNIT.

Note: PASD and gram stains are pending and will be reported in an addendum.

Varicella DNA Detection (Swabs)

Order 1444771528

Status: Final result Visible to patient: No (scheduled for 12/13/2023 10:00 AM)

0 Result Notes

Component Ref Range & Units	2 d ago
Varicella DNA Detection Not Detected	DETECTED !
Resulting Agency	MOSES

Onychomycosis

Best cure rate is with oral terbinafine

Topicals are not effective

Pulsed terbinafine protocol as effective as continuous

Pulsed = 500 mg terbinafine daily x 7 days, repeat 4 weeks later x 3 months total

https://pubmed.ncbi.nlm.nih.gov/26087080/ (pulsed protocol)

Topicals: ciclopirox 8% nail lacquer (daily x 48 weeks); efinaconazole 10% solution (daily x 48 weeks)

Terbinafine - Liver Monitoring

Renal clearance

Potential consequences: dysgeusia, aggravate anorexia in frail patients

*Baseline LFTs for PO options

https://jamanetwork.com/journals/jamadermatology/fullarticle/2707781 (In this study. the rates of alanine aminotransferase elevations, aspartate aminotransferase elevations, anemia, lymphopenia, and neutropenia in adults and children taking terbinafine or griseofulvin were low and equivalent to the baseline rates of abnormalities in this population. **Routine interval laboratory test result monitoring appears to be unnecessary in adults and children without underlying hepatic or hematologic conditions taking terbinafine or griseofulvin for dermatophyte infections.** Abandoning frequent laboratory monitoring can decrease unnecessary health care spending, decrease patient psychological angst associated with blood draws, and allow for expanded use of these effective oral medications.)

https://www.jaad.org/article/S0190-9622(20)32588-3/fulltext (**In adults with onychomycosis and well-controlled preexisting liver or hematologic conditions and/or grade 1 LFT or CBC abnormalities, treatment with terbinafine appears to be safe.** Mild baseline (grade 1) laboratory test result abnormalities or past medical history of liver and hematologic conditions are not necessarily contradictions for terbinafine therapy. **Baseline and monthly laboratory monitoring are recommended in this patient population.** If terbinafine is being considered for the treatment of patients with grade 2 or higher laboratory abnormalities, we recommend consultation with a primary care doctor, hepatologist, or hematologist.)

Case - Onychomycosis + Tinea Pedis

Referral from PCP for treatment-resistant **contact dermatitis or eczema**

Treatment: topical steroids + antifungals

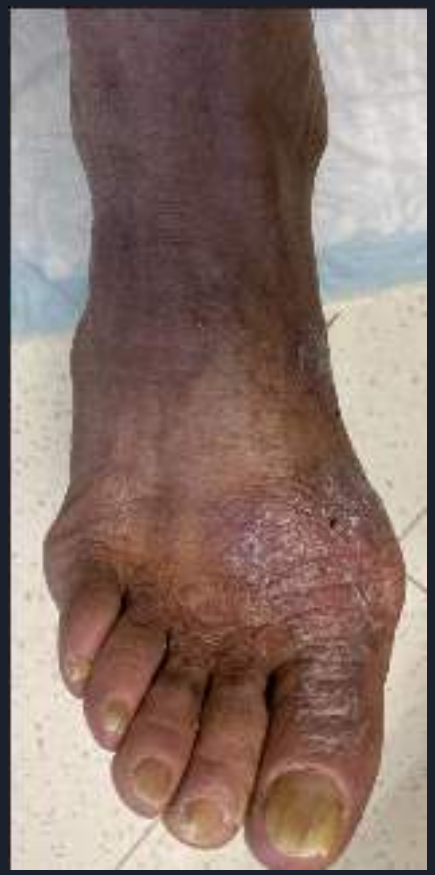
Yellow nail plates + subungual debris

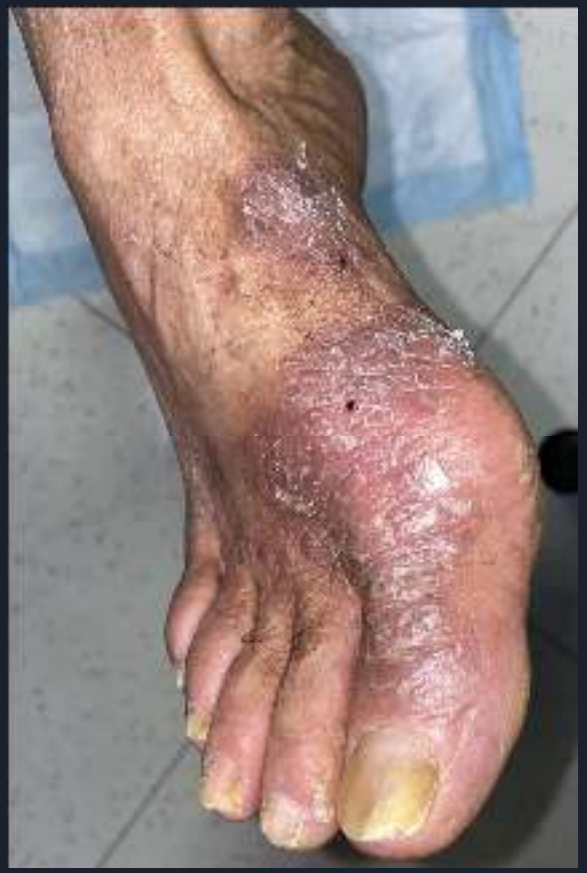
Management

KOH nail debris and nail plate

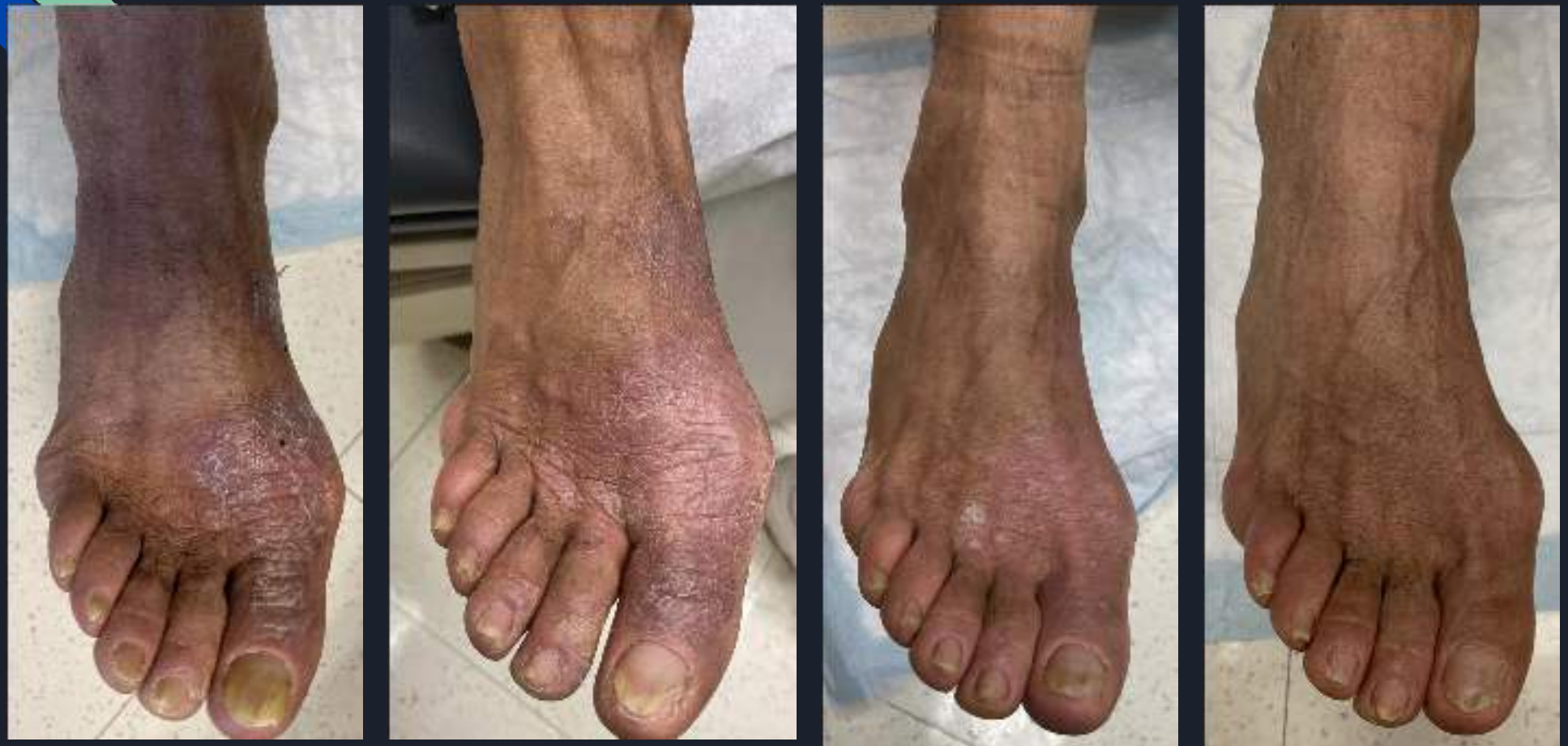
Terbinafine pulse x 3 months

Ketoconazole 2% cream nightly to feet and in between toes x 1 month → 3 nights/week





Case - Onychomycosis + Tinea Pedis



04/08 05/13 06/17 09/07

Key Points

- >50% PWH have dermatologic diseases
- CD4 count matters → expands treatment options
- Psoriasis: IL-23 inhibitors > TNF and IL-17 inhibitors
- Atopic derm/eczema: IL-4/13, IL-13 inhibitors
- Acyclovir resistant herpes: IV foscarnet > cidofovir
- Terbinafine safe with most ARTs
- Consider multiple diagnoses simultaneously (tinea+VZV, HSV+mpox)
- Swab vesicles/pustules/erosions/ulcers for HSV/VZV PCR +/- Mpox (clinical context)
- Swab pustules for wound culture
- Kaposi sarcoma: look inside the mouth → GI and pulm
- Refer to dermatology → lack of treatment response or consider alternative diagnosis

Thank You

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