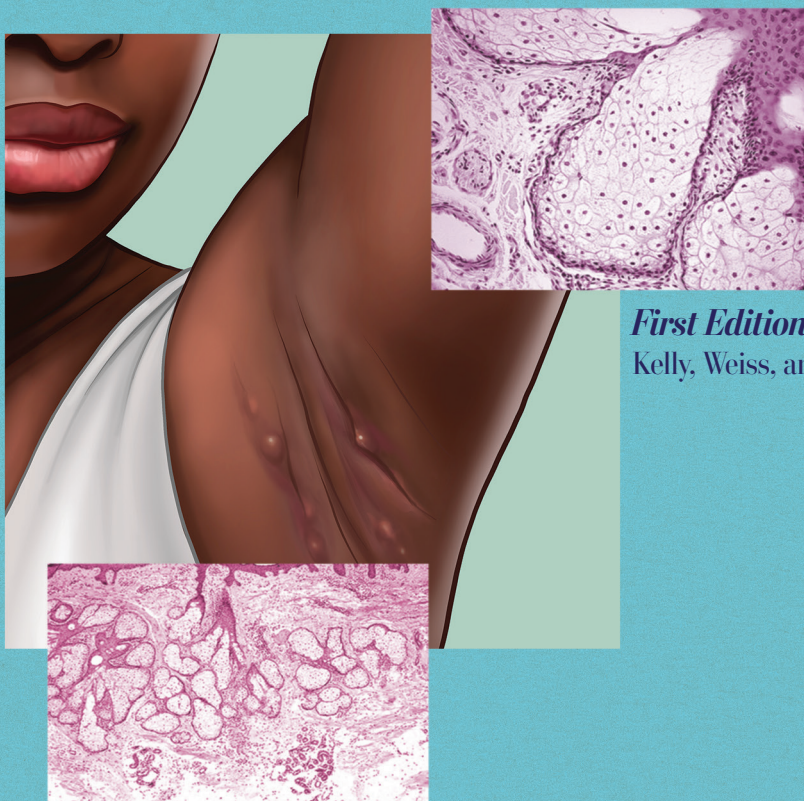


BROWN SKIN MATTERS

The Print Edition.



First Edition, 2026
Kelly, Weiss, and Ignas

BROWN
— SKIN —
MATTERS



Jerry M. Wallace
School of Osteopathic Medicine



Letter from the Editors

This zine has been a true collaborative effort and a genuine labor of love. What you hold in your hands represents the passion and dedication of students from several universities, colleagues across multiple countries, and a community of artists who generously shared their work, some of them pro bono. We are profoundly grateful for every contribution that helped this project come to life.

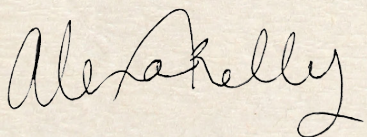
We also extend our sincere thanks to Skype a Scientist, whose funding and support made this publication possible. Their commitment to accessible, community-centered science aligns deeply with the mission of this zine.

Our inspiration for this project is rooted in the urgent need to improve dermatologic education and diagnostic accuracy for Black and Brown skin, an area that remains critically understudied. We want to acknowledge Brown Skin Matters, whose invaluable visual archive and advocacy helped illuminate just how wide this educational gap is, and how essential it is to address it.

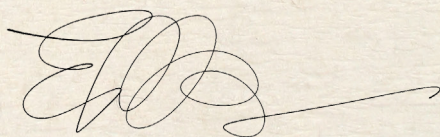
Our hope is that this zine serves as a practical, human-centered resource: one that strengthens diagnostic confidence, broadens understanding, and supports more equitable dermatologic care. Above all, we hope it helps people - patients, clinicians, learners, and our local communities who deserve representation and clarity in every aspect of health care.

Thank you for reading, learning, and being part of this shared effort.

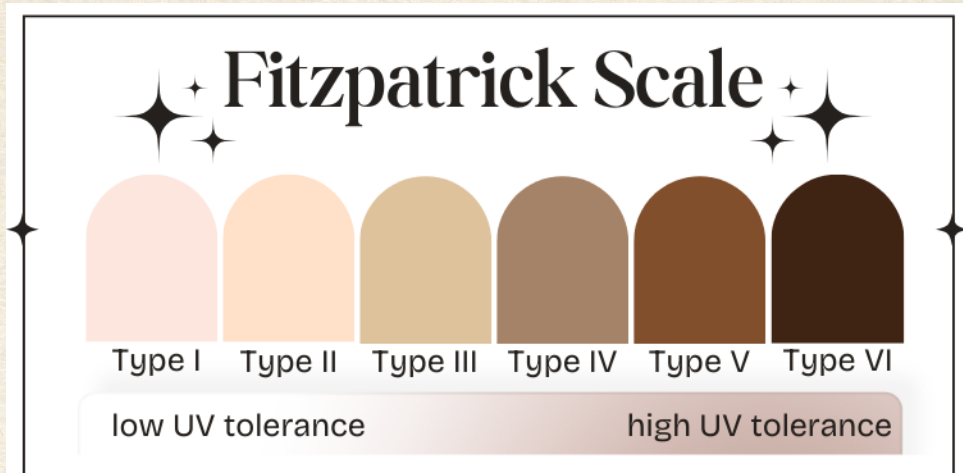
With much love and gratitude,

A handwritten signature in black ink, appearing to read 'Alexa Kelly', with a stylized, flowing script.

Alexa Kelly, PhD

A handwritten signature in black ink, appearing to read 'Ellen Weiss', with a stylized, flowing script.

Ellen Weiss



The skin color gradient chart above is called the “Fitzpatrick scale,” and it is a system doctors use to describe different skin types based on how skin reacts to sunlight. It ranges from Type I (very fair skin that almost always burns and never tans) to Type VI (deeply pigmented skin that rarely burns and darkens easily). In this publication, we will use this chart to communicate how certain skin conditions may look different across skin tones.

Meet the Team

Editors-in-Chief: Ellen Weiss and
Alexa Kelly, PhD

Content Supervisor: Consolata Ignas, MD

Editorial Assistants: Alyssa Harley and
Natalie Bardin

Writers: Carol Masanje, MD, Ashley Johnson, IBCLC, Abigail Cooley, Danisha Nicolas, Siena Ward, Alexa Sokhon, Michaela Brown, Jacklyn Snipe-Biles, MPH, Alyssa Harley, Rochelle Kirby, Jessica King, Natalie Bardin

Artists: Megan Yi, Mary Heald, Anna Diederichs of SayoStudio, Ni-ka Ford of Enlight Visuals, Evyn Caiazza of Lupine Studios, Ja'Neil Humphrey, MD, Anne Buchanan

Layout and Design: Ellie Hood

@BrownSkinMatters @avintaderm
@avinta_dermatology_aesthetics

Contents

Acanthosis Nigricans	1
Autoimmune Disorders	
Discoid Lupus Erythematosus	4
Scleroderma	4
Psoriasis	4
Vitiligo	5
Cutaneous tuberculosis	6
Eczema	
Eczema, General (Atopic Dermatitis)	8
Discoid Eczema	10
Dyshidrotic Eczema	10
Hidradenitis Suppurativa	11
Impetigo	13
Post-Inflammatory Hyperpigmentation	14
Sexually Transmitted Infections	
Chlamydia.....	15
Herpes.....	15
HIV-Related Seborrheic Dermatitis	16
HPV	16
Skin Cancers	
Basal Cell Carcinoma	17
Squamous Cell Carcinoma	18
Melanoma	19
Urticaria	20

Acanthosis Nigricans

By Caroline Masanje, MD

Acanthosis nigricans (AN) is a skin condition where certain areas, usually the **folds of the neck, armpits, or groin become darker and develop a velvety texture**. It is usually not painful or itchy. The darkened areas often have soft, blended edges.¹ Although it isn't harmful on its own, AN can sometimes be a **sign of an underlying issue**, such as insulin resistance, obesity, hormone changes, medication side effects, or, in rare cases, an internal cancer.²

AN is **fairly common**, with estimates ranging from about 7% to 74% depending on the population studied. It occurs more frequently in people with obesity. The condition is most commonly reported in Native American communities, followed by African American, Hispanic, and then Caucasian populations.³

AN happens when certain growth signals in the skin, often elevated in people with obesity or type 2 diabetes, drive the proliferation of epidermal keratinocytes and dermal fibroblasts. This leads to hyperkeratosis (**skin thickening**) and papillomatosis (**wart-like, benign tumors**), producing the characteristic of AN.⁴

Although AN is diagnosed clinically, **laboratory testing is important** to identify the cause. Management focuses on **addressing the underlying problem**, for example, weight reduction, discontinuation of an offending medication. Cosmetic concerns may be treated with topical agents such as retinoids, vitamin D analogues, keratolytics, and chemical peels.⁵



Acanthosis nigricans on Type IV skin

Illustration by Megan Yi

@bobbamilk

Individuals with **Fitzpatrick Types IV–VI** experience AN **more frequently** than those with Types I–III. In darker skin types (IV–VI), affected areas typically show more intense gray-brown to black pigmentation, while lighter skin types (I–III) may display milder brown discoloration.⁶

Autoimmune Disorders

By Abigail Cooley and
Danisha Nicolas

Autoimmune diseases occur when the body's immune system is unable to differentiate between healthy tissue and foreign antigens. Under normal circumstances, the immune system fights foreign invaders, such as bacteria and viruses, and helps to prevent illness. For those with an autoimmune disease, **the body mistakenly attacks its own tissues**, which it would typically ignore. Manifestations can be present in joints, muscles, cells, connective tissues, glands, and also the skin. Dermatological autoimmune conditions affect about 15 million, or 5–8% of the U.S. population, with **higher severity and scarring risk** reported in **Black patients**.⁷

Hallmarks of autoimmune diseases that affect the skin are **dry skin, itchy skin, scaly patches, and dark, or hyperpigmented marks**, after healing. The exact cause of autoimmune diseases are typically unknown, but **genetics, environment**, and triggers like **infections, stress, or sun exposure** may play a role.⁸

Examples of autoimmune diseases with skin involvement are discoid lupus erythematosus, scleroderma, and psoriasis. These conditions may present in the following ways:

Discoid Lupus Erythematosus (DLE) or Discoid Lupus:⁹

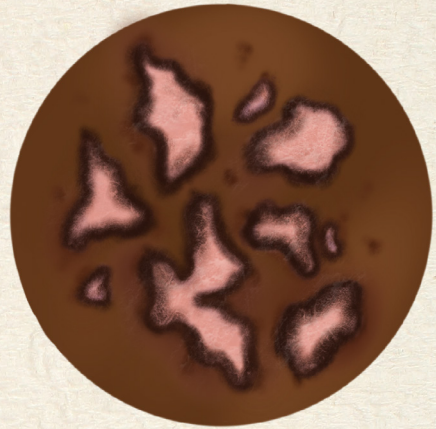
- Scaly lesions
- Round sores
- Usually not painful or itchy
- Lesions commonly seen in the face and scalp
- May cause scarring
- Most common in Black women age 30–40 years old

Scleroderma:^{10, 11}

- Tightening of skin
- Color changes to fingers and toes
- Most common in Black women age 40–50 years old

Psoriasis:^{12, 13, 14}

- Thick, raised, silvery, scaly plaques that may appear purple on Types IV–VI
- Occur at any age but symptom onset is usually at age 15–25
- Common sites include the scalp, elbows, knees, lower back



Discoid Lupus Erythematosus on Type V skin

*Illustration by Anna Diederichs
of Sayo Studio*

Treatments for milder forms of these conditions may include topical medications, sun protection, dietary changes and stress management. In severe cases, systemic steroids, anti-inflammatories, light therapy and biologics (medications derived from living cells) may be used. A cross-disciplinary care team approach is important for managing cases as these diseases progress.^{9,10,12,14}

Vitiligo

By Jessica King and
Alexa Sokhon

Vitiligo is another **autoimmune disorder** that causes destruction of melanocytes, which are pigment-producing cells primarily found in the skin, hair, and eyes. Destruction of pigment-producing cells by the immune system results in **hypopigmented (lighter) to depigmented patches** that appear across various parts of the body.¹⁵ Because vitiligo arises from underlying immune system dysregulation, individuals with vitiligo have an **increased risk of developing additional autoimmune disorders**. Vitiligo occurs most frequently among Asian and Hispanic/Latino populations.¹⁶ The trigger for vitiligo is not fully understood, but it is believed to result from both **genetic and environmental factors**.¹⁵

In patients with Fitzpatrick Types IV–VI, vitiligo often appears **more visible** due to the **high contrast** between the depigmented

patches and the surrounding darker, pigmented skin. Early signs of vitiligo may first appear as small, pale patches, commonly on the face. These areas of skin gradually become depigmented patches that spread to other body regions, such as the neck, trunk, and arms.¹⁷

Treatment for vitiligo is **dependent on** both the **severity and progression** of the condition. Immunosuppressive therapies can be used to promote repigmentation of discolored patches and prevent further loss of pigment cells.¹⁵



Vitiligo on Type V skin

Illustration by Mary Heald

Cutaneous Tuberculosis

By Siena Ward

Cutaneous tuberculosis (CTB) is a **long-lasting skin infection** caused mostly by the bacteria *Mycobacterium tuberculosis*. It's a rare type of TB that affects the skin, making up about 1.5% of all cases worldwide.^{18,19,20} In rare instances, CTB can result from *Mycobacterium bovis* or the Bacillus Calmette-Guérin (BCG) vaccine.^{19,20} Infection can happen when the bacteria gets directly into the skin, spreads through the bloodstream, or moves from a nearby infected area. CTB is most commonly seen in **people with low incomes, HIV, or weakened immune systems**.²⁰

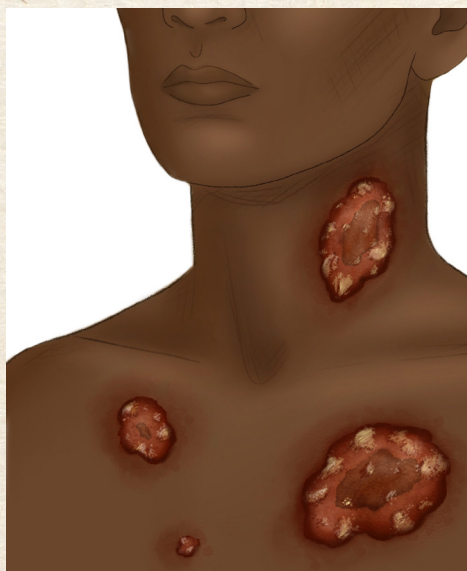
Lesions may present as **lumps, ulcers, raised, thickened, solid skin patches, abscesses, or bumpy, wart-like skin growths**, and may occur in combination.¹⁸ How the skin looks depends

on the type of bacteria, if the person has been exposed to TB before, and how their immune system reacts. Lesions can be classified as either true cutaneous tuberculosis or tuberculids, which is a hypersensitivity skin reaction to tuberculosis somewhere else in the body.¹⁸ **Common forms of CTB include:**

Tuberculous chancre: Makes up about 1% of cases.¹⁸ Appears 1–4 weeks after infection as a firm red or purple bump that develops into a painless ulcer with a coarse base. Regional lymph nodes may also swell.

Tuberculosis verrucosa cutis: Makes up 3–19% of cases.¹⁸ Appears as a rough, warty, raised skin growth with a hard, bumpy surface, often on the lower legs or feet, due to contact with contaminated surfaces. These lesions grow slowly, often have no symptoms, and are often diagnosed years after onset.¹⁸

Lupus vulgaris, the most common form, is responsible for roughly 63% of cases.¹⁸ It can develop from an internal infection or by bacteria entering through the skin. Lesions are slow-growing and have no symptoms. They typically appear on all skin types as a red-brown plaque with yellowish-white and red spots, pinkish-red background, scaly and scarred borders, and white structureless areas, most often on the head, neck, arms, or legs.^{18,19,21}



Cutaneous Tuberculosis,
Lupus Vulgaris on Type V skin

*Illustration by Anna Diederichs
of Sayo Studio*

Treatment for CTB follows the **same regimen** as **other forms of TB**. Treatment usually includes **special courses of antibiotics** for several months.^{18,19,20} Currently, there are no creams or ointments for treating CTB. Additional approaches may include surgical intervention or, in drug-resistant cases, the use of alternative drugs such as streptomycin.²⁰ CTB caused by unusual mycobacteria is often more resistant to standard drug regimens.²⁰

Eczema

By Alexa Sokhon and
Michaela Brown

The most common form of eczema is **atopic dermatitis, a chronic, recurrent, inflammatory skin condition** characterized by **itchy, dry, and bumpy skin**.

Though its exact cause is unknown, both **genetic and environmental** factors are believed to contribute.

A weakened skin barrier allows irritants to penetrate and trigger immune responses. Many patients have gene mutations affecting the immune system or skin barrier and often have family histories of eczema, asthma, or allergies.

Symptoms tend to fluctuate, with flare-ups triggered by detergents, soaps, pet dander, stress, humidity, and temperature changes.²²

Eczema affects roughly 10–20% of children and 2–10% of adults worldwide and is more common in rural areas than urban ones.²³

Regular moisturization with ointments are preferred over lotions for their higher oil content. These are essential to reinforce the skin barrier. Treatment may include topical corticosteroids, while avoiding fragrances and harsh soaps can help prevent irritation.

While **atopic dermatitis** is the **most prevalent**, eczema can present as **several other forms**, such as **discoïd eczema and dishydrotic eczema**.



Eczema, general
(atopic dermatitis) on Type V skin
(above)

*Illustration by Ni-Ka Ford, MS
of Enlight Visuals @enlight_visuals*

On lighter skin tones (Fitzpatrick Types I–III), eczema appears as red or pink rashes with visible flakes or fluid-filled bumps. **On medium to dark skin tones (Types IV–VI),** it may appear **purple, gray, dark brown, or ashen**, often with more pronounced thickening or scarring.²⁴ Darker skin tones are also more **prone to long-lasting pigment changes**, such as dark or light spots following flare-ups.²⁴

Eczema, general
(atopic dermatitis) on Type V skin
(below)

*Photograph courtesy of
@brownskinmatters*



ECZEMA



Discoinfect eczema on Type V skin



Dyshidrotic eczema on Type VI skin

*Illustrations by Ni-Ka Ford, MS.
of Enlight Visuals @enlight_visuals*

Discoinfect eczema, or nummular eczema, is a subtype of eczema that presents as a **raised, scaly coin-shaped plaque** that is **itchy** and can last weeks to months. It is found on the hands, forearms, and lower legs. In darker skin tones, it may appear as **brown spots** as compared to pink or red in lighter skin tones.²⁵

Dyshidrotic eczema, or acute palmoplantar eczema, forms **fluid-filled, thick bumps** on the **palms of hands and soles of feet**.²⁶ These lesions **appear suddenly**, can grow in size and are commonly referred to as having a “tapioca pudding” appearance.²⁶

Hidradenitis Suppurativa (Acne inversa)

By Jacklyn Snipe-Biles, MPH

Hidradenitis Suppurativa (HS) is a **chronic inflammatory skin condition** that causes painful lumps under the skin, often in **areas where skin rubs together** (armpits, groin, under breasts). These lumps can form abscesses, leak fluid, and create tunnels under the skin, leading to scarring.

HS affects about 1% of the global population, with prevalence ranging from 1% to 4% in Europe and lower in North America. It is **more common in women** (4:1 ratio) and usually starts after puberty. Race-specific data show the highest prevalence among **African Americans** (1.3%), intermediate in Caucasians (0.75%), and lowest in Hispanics (0.07%).²⁷

The **cause is unclear** but likely multifactorial, involving blocked hair follicles, genetics (family history in up to 40% of cases), obesity, smoking, and hormonal influences. Genetic factors may explain higher prevalence among certain ancestral groups.²⁸

HS cannot be cured, but **symptoms can be managed** with anti-inflammatories, antibiotics, and sometimes surgery. **Lifestyle changes** like weight control and quitting smoking help reduce flare-ups.²⁸



Hidradenitis Suppurativa on Type V skin

*Illustration by Evyn Caiazza
of Lupine Studios*

On Fitzpatrick Types I–III, lesions appear red or pink, while on **dark brown skin**, Types IV–VI, they may look **purple or dark brown**. Scarring and pigment changes can be **more pronounced on darker or dark brown skin**.²⁹

Impetigo

(Primary types are non-bullous or bullous,³² also known as school sores³³)

By Alyssa Harley

Impetigo is a skin infection **caused by bacteria**, typically *Staphylococcus* or *Streptococcus*, that presents as sores on the face, arms, and/or legs.³² Impetigo is **most often seen in young children**, but it can occur in people of all ages. It affects about 5% of adults globally, compared to 12% of children.³² In adults, it is most common in **crowded conditions**, in populations without consistent access to clean water or soap, and in **warm, humid climates**.³³ Impetigo spreads easily from person to person by **skin-to-skin**

contact, such as handshakes.³³ It may occur in minor cuts or insect bites.³⁰

In Type V and Type VI skin-colored individuals, the sores appear **darker red or purplish**, compared to the bright red appearance in Type I–IV skin.³⁴ When the sores become crusty, they turn honey-colored and may ooze pus-like liquid.³²

Impetigo is treated with over-the-counter antibiotic ointment for minor infections or prescription oral antibiotics for more serious cases.³⁵



Impetigo on Type IV skin

Photograph courtesy of
@brownskinmatters



Impetigo on Type V skin

Illustration by Anna Diedrichs
of Sayo Studio

Post-Inflammatory Hyperpigmentation

(Post-inflammatory melanosis, reactive hypermelanosis)

By Rochelle Kirby

Post-inflammatory hyperpigmentation (PIH) is the **darkening of skin** caused by **excess melanin** production **following inflammation**. It can occur after acne, eczema, abrasions, or other skin injuries, as melanin becomes distributed in the epidermis or dermis. The discoloration **typically fades** gradually over several weeks or months.

PIH is most common in middle-aged women and **individuals with darker skin tones** (Fitzpatrick Types III–VI). On lighter skin (Types I–III), it appears as pink to tan blotches, while on **darker skin** (Types IV–VI), it presents as **dark brown to black** patches at sites of inflammation. It occurs frequently in people of African, Middle Eastern, Asian, and Latin American descent, with incidence rates reaching up to 65%.³⁶ About half of Black Americans report concerns related to hyperpigmentation.³⁷



PIH on Type V skin

Illustration by Ja'Neil Humphrey, MD

Topical treatments can help reduce the appearance of PIH. Broad-spectrum sunscreen prevents further darkening, while agents such as hydroquinone, kojic acid, and retinoic acid inhibit melanin production. Chemical peels, glycolic acid, and laser treatments can also accelerate skin renewal and improve pigmentation over time.^{37,38}

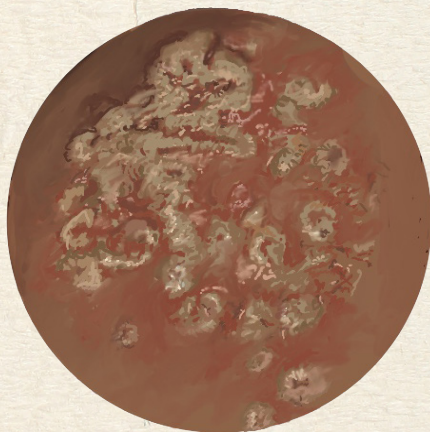
Sexually-Transmitted Infections

By Jessica King

Sexually Transmitted Infections (STIs) are a collection of infectious diseases primarily spread by sexual contact, including anal, oral, and vaginal sex.³⁹ Many STIs include dermatological involvement, such as **sores on and around the genitalia, or skin rashes elsewhere on the body.**

Across the Fitzpatrick scale, these **presentations will vary slightly**, depending on the type of STI. Individuals with Types IV–VI are also **more likely to deal with hyperpigmentation** (darkened skin), rather than redness, after the skin heals.

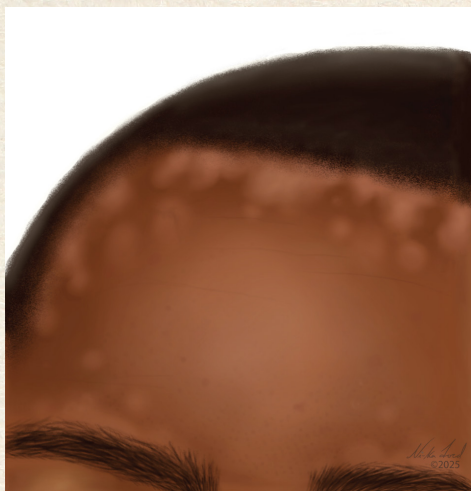
Chlamydia: Chlamydia typically presents without skin abnormalities. When skin changes do surface on Types IV–VI, they appear as darkened, purple-gray colored, moist patches.



Herpes on Type V skin

Illustration by Anne Buchanan

Herpes: Types IV–VI will have clusters of fluid-filled blisters with darkened, grayish skin surrounding the blisters.



HIV-Related Seborrheic Dermatitis on Type V skin

*Illustration by Ni-Ka Ford, MS
of Enlight Visuals @enlight_visuals*

HIV-Related Seborrheic

Dermatitis: This infection typically appears in areas with several oil glands such as the face, chest, scalp, and groin.⁴¹ Types IV–VI with this infection present with gray-brown dry patches and overlying fine, white flakes.



HPV on Type V skin

Illustration by Anne Buchanan

Human Papillomavirus

(HPV): On Types IV–VI, HPV will appear as brown or gray, darkened, wart-like bumps.

Treatments for STIs are dependent on the specific infection. Curable infections, such as Chlamydia, Gonorrhea, Syphilis, and Trichomonas can all be treated with antibiotics.⁴¹ Viral infections are generally less likely to be completely cured, but anti-viral treatments are available to prevent or reduce symptoms. Other in-patient treatment modalities include cryotherapy with liquid nitrogen and electrocautery.

Skin Cancers

By Natalie Bardin

Skin cancer occurs when skin **cells grow uncontrollably**. If left untreated, it can spread to other parts of the body and become life threatening. Skin cancers often occur when **damaging ultraviolet (UV) light** from sun exposure causes genetic changes in skin cells. People with Fitzpatrick Types IV–VI have more protection from damaging sun rays, as the higher melanin content in their skin helps to shield cells. In fact, Type I–II individuals are 70 times more likely to develop skin cancers. However, **skin cancer can occur on anyone**. Skin cancers on darker skinned individuals more often occur on parts of the body with less melanin, such as the **soles of the feet and palm of the hands**. On Types IV–VI, skin cancers are **often not found until they have reached advanced stages**, when they are harder to treat and survival is less likely. Thus, **it is important for**

everyone to protect their skin using sunscreens, and to **check it for unusual spots often**.

Skin cancer most often occurs as the following types:

Basal Cell Carcinoma (BCC), the least dangerous type of skin cancer, accounts for about 20–30% of skin cancer cases in people of color (POC). It most often appears on the head or neck as a shiny,



BCC on Type V skin

Illustration by Mary Heald

BCC is most prevalent among Hispanic and Chinese individuals and least common in Black individuals. **Sun exposure is the primary cause**, though a weakened immune system and genetic conditions such as Gorlin's syndrome increase risk. While BCC **rarely metastasizes**, untreated cases can cause **extensive local damage**. Low-risk lesions are treated by destroying the cancer cells on the surface of the skin, while high-risk cases may require surgical removal.⁴³

Squamous cell carcinoma is the **most common skin cancer in POC**, comprising 30–65% of cases.⁴⁴ It typically appears as a **non-healing sore, a raised bump with a central depression, or a rough, scaly patch**. In POC, SCC often develops on the **legs, feet, or areas not exposed to the sun**.⁴² It is frequently **associated with HPV infection**—found in over 85% of Black and 65% of Hispanic patients with SCC.⁴⁴ Scarring, immune suppression, and genetic factors also increase risk.^{42, 44} Treatment for low-risk lesions includes topical therapy or cryosurgery; advanced cases may require surgery, radiation, or systemic therapy.⁴⁵



SCC on Type V skin

Illustration by Mary Heald



SCC on Type III skin

*Photograph courtesy of
@brownskinmatters*

Melanoma is a less common but more aggressive form of skin cancer that can spread rapidly if untreated.⁴⁶ In POC, it often appears as a dark, changing spot or mole with irregular borders, typically on the lower body, palms, soles, nails, mouth, or genitals.^{42, 46}

Because it is frequently diagnosed at later stages, the **five-year survival rate for POC** is about **22% lower** than for Type I–II individuals. After White populations, melanoma is most common among American Indian/Alaska Native and Hispanic groups. Early-stage melanoma is treated surgically, while advanced disease may require radiation, chemotherapy, or immunotherapy.⁴²



Melanoma on Type V skin

Illustration by Mary Heald

Urticaria

By Ashley Johnson

Urticaria, or hives, is characterized by **raised, often itchy welts on the skin**. It affects approximately 20% of the population at some point in life, making it a **common condition**. On Fitzpatrick Types I–III, lesions typically appear red or pink, whereas on **darker skin tones, elevation** may be visible **without noticeable redness**.⁴⁷



Urticaria on Type V skin

Illustration by Mary Heald

Urticaria is frequently **associated with allergic reactions** and may be **triggered by medications, infections, foods, insect bites or stings, and stress**.

The rash can last from minutes to several days depending on the cause.⁴⁸ Urticaria may be acute, lasting less than six weeks, or chronic, lasting longer than six weeks, often with no identifiable cause. Urticaria may be triggered by systemic stimuli such as food, or physical stimuli such as heat, cold, pressure, sweating, or sunlight.

Management focuses on **identifying and avoiding triggers**. Symptomatic relief can be achieved through cold compresses and loose-fitting clothing to minimize irritation. Typical treatments are antihistamines, but chronic cases may need additional therapies.⁴⁹

Funding for the production of this zine was provided by Skype A Scientist (skypeascientist.com). The funder had no influence on the content or its development.

The authors are affiliated with Campbell University; however, this material was created independently and is not reviewed or directly sponsored by the university.

This product is intended for educational purposes only and is not a substitute for professional medical advice, diagnosis, or treatment. If you have questions or concerns about your health, please consult your primary care provider or another qualified healthcare professional.

© 2025 Alexa Kelly. All rights reserved.

Don't copy, repost, or redistribute this zine without permission.
Feel free to reach out if you'd like to use or share it for educational purposes.

Questions or concerns, please contact:
CUSOM

Attn.: Alexa Kelly

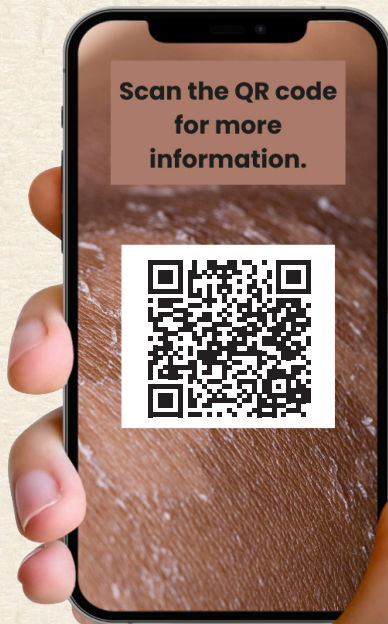
Post Office Box 4280, Buies Creek, North Carolina, 27506

Getting answers about your skin is now easier than ever.

Artificial intelligence is reshaping skin cancer detection, yet multiple research studies show that current AI-driven skin cancer screening apps have reduced accuracy in identifying lesions on darker skin. Before using any app, talk to a dermatologist or healthcare provider.

Learn more:

- Visit trusted sources
- Explore AAD.org for dermatologist-verified information
- Scan the QR code below for more information



References

1. Smid CJ, Modaff P, Alade A, Legare JM, Pauli RM. Acanthosis nigricans in achondroplasia. 2018;(April):1–7.
2. Hermanns-Le T. Acanthosis Nigricans Associated with Insulin Resistance Pathophysiology and Management. 2004;5(3):199–203.
3. Phiske MM. An approach to acanthosis nigricans. 2014;5(3):239–50.
4. Das et al, 2020. Acanthosis nigricans : A Review. J Cosmet Dermatol. 2020;
5. Alzahrani D. The efficacy of topical treatments for acanthosis nigricans : a systematic review of randomized controlled trials. 2025;(October).
6. Landa-Anell V, Lopez-alvarenga JC, Garcia L, Gonza J. Influence of Skin Color on the Diagnostic Utility of Clinical Acanthosis Nigricans to Predict Insulin Resistance in Obese Patients. 2006;37:744–8.
7. DeWidt, Lynda. “New Study Calculates Autoimmune Disease Prevalence in U.S.” Mayo Clinic News Network, 6 Jan. 2025.
8. Office of Research on Women’s Health. “OADR-ORWH.” National Institutes of Health
9. “Discoid Lupus Erythematosus: What Is It, Causes, Symptoms ...” Cleveland Clinic
10. “Scleroderma — Symptoms & Causes.” Mayo Clinic
11. “Significant Disparities Persist in Cutaneous Presentations, Diagnosis and Outcomes of Scleroderma in Skin of Color.” Dermatology Times, 22 Aug. 2024.
12. Cleveland Clinic. “Psoriasis: What It Is, Symptoms, Causes, Types & Treatment.” Cleveland Clinic, 15 Sept. 2022.
13. National Psoriasis Foundation. “Psoriasis: Symptoms, Causes, Images & Treatment.” National Psoriasis Foundation, 24 June 2025.
14. Cleveland Clinic. “How Psoriasis Affects Black People and People of Color.” Cleveland Clinic Health Library, 1 May 2023.
15. Frisoli, Maria L., Kennedy Essien, and John E. Harris. “Vitiligo: Mechanisms of Pathogenesis and Treatment.” Annual Review of Immunology, vol. 38, no. 1, 2020, pp. 621–648. Annual Reviews, <https://doi.org/10.1146/annurev-immunol-100919-023531>
16. Mastacouris, Nicholas, Austin Strunk, and Amit Garg. “Incidence and Prevalence of Diagnosed Vitiligo According to Race and Ethnicity, Age, and Sex in the US.” JAMA Dermatology, vol. 159, no. 9, 2023, p. 986. American Medical Association, <https://doi.org/10.1001/jamadermatol.2023.2162>
17. Ezzedine K, & Harris J.E. (2019). Vitiligo. Kang S, & Amagai M, & Bruckner A.L., & Enk A.H., & Margolis D.J., & McMichael A.J., & Orringer J.S.(Eds.), Fitzpatrick’s Dermatology, 9e. McGraw-Hill Education. <https://accessmedicine.mhmedical.com/content.aspx?bookid=2570§ionid=210419032>
18. Tobin, E. H., Warda, K., Gropper, C., Apple, A., & Vadakekut, E. S. (2025, May 13). Cutaneous Tuberculosis. In StatPearls [Internet]. StatPearls Publishing. <https://www.ncbi.nlm.nih.gov/books/NBK482220/>
19. Ngan, V. & Oakley, A. (2015). Cutaneous tuberculosis. DermNet. <https://dermnetnz.org/topics/cutaneous-tuberculosis>

20. Nguyen, K. H., Alcantra, C. A., Glassman, I., May, N., Mundra, A., Mukundan A., Urness, B., Yoon, S., Sakaki, R., Dayal, S., Chowdhury, T., Harshavardhan, S., Ramanathan, & V., Venketaraman, V. (2023). Cutaneous Manifestations of Mycobacterium tuberculosis: A Literature Review. *Pathogens*, 12(7), 920. <https://doi.org/10.3390/pathogens12070920>
21. Ankad, B.S., Adya, K.A., Gaikwad, S. S., Inamadar, A. C., & Manjula, R. (2020). Lupus Vulgaris in Darker Skin: Dermoscopic and Histopathologic Incongruity. *Indian Dermatology Online Journal*, 11(6), 948-952. https://journals.lww.com/idoj/fulltext/2020/11060/lupus_vulgaris_in_darker_skin__dermoscopic_and.12.aspx
22. Nemeth, V., H. A. Syed, and J. Evans. "Eczema." *StatPearls*, 1 Mar. 2024, NCBI Bookshelf.
23. National Eczema Association. "Eczema Statistics."
24. Hewett, L. "Eczema in Skin of Color: What You Need to Know." National Eczema Association, 22 Sept. 2023.
25. Eczema types: Nummular eczema overview. (2025). <https://www.aad.org/public/diseases/eczema/types/nummular-dermatitis>
26. Calle Sarmiento PM, Chango Azanza JJ. Dyshidrotic Eczema: A Common Cause of Palmar Dermatitis. *Cureus*. 2020 Oct 7;12(10):e10839. doi: 10.7759/cureus.10839. PMID: 33173645; PMCID: PMC7647841.
27. Lee, D. E., Alhusayen, R., & Lansang, P. Q. "Hidradenitis Suppurativa: An Update." *Dermatologic Clinics*, vol. 35, no. 1, 2017, pp. 75–86.
28. Sachdeva, M., et al. "Hidradenitis Suppurativa: Epidemiology, Pathogenesis, and Management." *Journal of Dermatological Treatment*, vol. 31, no. 7, 2020, pp. 710–718.
29. "Fitzpatrick Skin Phototype." *LightSkinScience Academy*, CLINUVEL, <https://lightskinscience.clinuvel.com/lss-academy/fitzpatrick-who/>.
30. Hartman-Adams, H., Banvard, C., & Juckett, G. (2014). Impetigo: diagnosis and treatment. *American family physician*, 90(4), 229–235.
31. Department of Health & Human Services. (2000). Impetigo - school sores. Better Health Channel. <https://www.betterhealth.vic.gov.au/health/conditionsandtreatments/impetigo-school-sores#bhc-content>
32. Wei MD E, Plovanih MD M, Burgin MD S. (2025). Nonbullous impetigo in Adult. In: Goldsmith LA, ed. *VisualDx*. Rochester, NY. <https://www.visualdx.com/visualdx/diagnosis/?moduleId=101&diagnosisId=51763&imgSet=1#view=handout>
33. U.S. Centers for Disease Control and Prevention. (2025). About Impetigo. <https://www.cdc.gov/group-a-strep/about/impetigo.html>
34. Gupta, V., & Sharma, V. (2019). Skin typing: Fitzpatrick grading and others. *Clinics in Dermatology*, 37(5), 430-436.
35. Usatine R.P. (2019). Impetigo. Usatine R.P., & Smith M.A., & Mayeaux, Jr. E.J., & Chumley H.S.(Eds.), *The Color Atlas and Synopsis of Family Medicine*, 3e. McGraw-Hill Education. <https://dermatology.mhmedical.com/content.aspx?bookid=2547§ionid=206786347>
36. Taylor, S., Grimes, P., Lim, J., Im, S., & Lui, H. (2009). Post-inflammatory hyperpigmentation. *Journal of Cutaneous Medicine and Surgery*, 13(4), 183–191.

37. Nautiyal, A., & Wairkar, S. (2021). Management of hyperpigmentation: Current treatments and emerging therapies. *Pigment Cell & Melanoma Research*, 34(6), 1000–1014. <https://doi.org/10.1111/pcmr.12986>
38. Tan, M. G., Kim, W. B., Jo, C. E., Nabieva, K., Kirshen, C., & Ortiz, A. E. (2022). Topical treatment for post-inflammatory hyperpigmentation: A systematic review. *Journal of Dermatological Treatment*, 33(5), 2518–2526. <https://doi.org/10.1080/09546634.2021.1981814>
39. Fasciana, T., G. Capra, D. Lipari, A. Firenze, and A. Giammanco. “Sexually Transmitted Diseases: Diagnosis and Control.” *International Journal of Environmental Research and Public Health*, vol. 19, no. 9, 2022, p. 5293. DOI: 10.3390/ijerph19095293.
40. Bobotsis, R., Brathwaite, S., Eshtiaghi, P., Rodriguez-Bolanos, F., & Doiron, P. (2024). HIV: Inflammatory dermatoses. *Clinics in dermatology*, 42(2), 169–179. <https://doi.org/10.1016/j.clindermatol.2023.12.004>.
41. Garcia, M. R., S. W. Leslie, and A. A. Wray. “Sexually Transmitted Infections.” StatPearls, StatPearls Publishing, Treasure Island, FL, 2025
42. Gupta, A. K., M. Bharadwaj, and R. Mehrotra. “Skin Cancer Concerns in People of Color: Risk Factors and Prevention.” *Asian Pacific Journal of Cancer Prevention*, vol. 17, no. 12, 2016, pp. 5257–5264. DOI: 10.22034/APJCP.2016.17.12.5257
43. Cazzato, G., and G. Ingravallo, editors. *Skin Cancer: Past, Present and Future*. IntechOpen, 2025. DOI: 10.5772/intechopen.111249.
44. Hogue, L., and V. M. Harvey. “Basal Cell Carcinoma, Squamous Cell Carcinoma, and Cutaneous Melanoma in Skin of Color Patients.” *Dermatologic Clinics*, vol. 37, no. 4, 2019, pp. 519–526. DOI: 10.1016/j.det.2019.05.009.
45. Combalia, A., and C. Carrera. “Squamous Cell Carcinoma: An Update on Diagnosis and Treatment.” *Dermatology Practical & Conceptual*, vol. 10, no. 3, 2020, e2020066. DOI: 10.5826/dpc.1003a66.
46. Brunsgaard, E. K., Y. P. Wu, and D. Grossman. “Melanoma in Skin of Color: Part I. Epidemiology and Clinical Presentation.” *Journal of the American Academy of Dermatology*, vol. 89, no. 3, 2023, pp. 445–456. DOI: 10.1016/j.jaad.2022.04.056.
47. Bass, M., L. Atkinson, and B. Shenker. “Urticaria.” *ClinicalKey*, 2025.
48. Key, A. P. “Hives and Your Skin.” *WebMD*, 2025.
49. Rojo-Gutierrez, M. I., C. V. Moncayo-Coello, A. Macias Weinmann, et al. “Urticaria and Other Mimickers of Urticaria.” *Frontiers in Allergy*, vol. 5, 2025. DOI: 10.3389/falgy.2024.1522749.

Glossary of Key Terms

Abscess: a collection of pus – 6, 11

Acute: Lasting a short time – 10, 20

Antibiotics: Medications that prevent the growth of or kill bacteria – 11, 13, 16

Antigens: substances that cause the body's immune system to respond, often parts of bacteria, viruses, or other foreign materials that the body recognizes as “not self,” leading it to make antibodies to fight them – 3

Antihistamines: medications that block the effects of histamine, a chemical released by the body in response to allergic reactions – 8, 20

Anti-inflammatories: medications that reduce swelling and pain – 4, 11

Anti-viral treatments: Medications that prevent the growth of viruses – 16

Asymptomatic: producing or showing no symptoms – 6

Autoimmune: a condition in which the body's immune system mistakenly attacks its own healthy tissues and organs (also in vitiligo) – 3, 5

Bacillus Calmetter-Guérin vaccine: a vaccine that protects against tuberculosis (TB) – 6

Basal cell carcinoma: A skin cancer that appears as a shiny, black, or skin-colored bump – 17, 18

Bullous: characterized by large, fluid-filled blisters (bullae) – 13

Chemical peel: A procedure that uses chemicals to remove the top layer of skin so new, smoother skin regrows – 1, 14

Chlamydia: A bacterial infection that sometimes create sores or moist patches – 15, 16

Chronic: Lasting a long time or recurring frequently – 6, 7, 11, 20

Cryosurgery: Using extreme cold to freeze and destroy cancer cells on surface of the skin – 18

Cryotherapy: Using extreme cold as a medical treatment – 16

Depigmented: reduce or remove the pigmentation of a person's skin – 5

Dermal fibroblasts: the main type of cell in the dermis layer of the skin –

Dermis: The middle layer of the skin that contains blood vessels, nerve endings, and sweat glands – 14

Electrocautery: Using an electric current to cut, remove, or create scars – 16

Electrodessication and curettage: Scraping and burning cancer cells on the surface of the skin to remove and destroy them – 18

Epidermal keratinocytes: the main type of cell in the epidermis layer of the skin – 1

Epidermis: The exterior layer of the skin that provides skin coloration and acts as a protective barrier to the body – 14

Gene mutations: a permanent change in the DNA sequence that makes up a gene – 8

Glycolic acid: A chemical, found in skincare products, that exfoliates the skin to brighten and smooth the skin – 14

Herpes: A viral infection that causes blisters around the mouth or genitals – 15

HIV-related seborrheic dermatitis: Scaly, inflamed patches of skin that occur in oily parts of the body like the scalp, eyebrows, or ears – 16

Human Papillomavirus (HPV): A viral infection that causes wart-like bumps – 16, 18

Hydroquinone: A chemical that reduces the production of melanin to lighten and even skin tone – 14

Hyperkeratosis: a condition where the skin becomes excessively thick in certain areas – 1

Hyperpigmentation: Darkened patches of skin that result of an increase in melanin production – 3, 14, 15

Hypopigmented: a reduction in skin color, resulting in paler patches or areas that are lighter than the surrounding skin – 5

Insulin resistance: a condition where cells in the body do not respond normally to the hormone insulin, leading to elevated glucose levels in the blood – 1

Immunosuppressed: a person whose immune system is weaker than normal, making it harder for the body to fight infections – 6

Immunosuppressive therapies: a medical treatment that deliberately weakens the body's immune system to stop it from attacking healthy tissues or to prevent organ rejection – 5

Infiltrated plaques: thick, raised patches of skin that feel firm because cells and fluids have built up underneath – 6

Inoculation: the process of introducing a vaccine or small amount of a germ into the body to help build immunity or protection against disease – 6

Keratolytics: compounds that break up the outer layer of the skin to help break up hard skin or dead skin cells – 1

Kojic acid: A chemical that reduces the production of melanin to lighten and even skin tone – 14

Lesions: a general term for any area of damaged or abnormal skin – 4, 6, 7, 10, 12, 18, 20, 22

Liquid nitrogen: Nitrogen in a liquid state at very low temperature, used to freeze cells – 16

Melanin: A substance in the skin that provides pigmentation for the skin, eyes, and hair – 14, 17

Melanocytes: a cell in the skin and eyes that produces and contains the pigment called melanin – 5

Melanoma: A skin cancer that appears as a dark, changing spot or mole with irregular borders – 19

Metastasis: Spreading to other parts of the body – 18

Modalities: Ways or modes in which things are done – 16

Multifactoral: Caused by many different factors – 11

Mycobacterium bovis: a close relative of the bacteria that cause human tuberculosis – 6

Mycobacterium tuberculosis: a type of bacteria that causes tuberculosis (TB) – 6

Non-bullous : does not involve large, fluid-filled blisters (bullae) – 13

Papillomatosis: a condition where small, wart-like, benign tumors grow on the surface of the skin – 1

Pigmentation: the coloring of a person's skin – 2, 14

Post-inflammatory hyperpigmentation: Darkened, discolored skin caused by excess production of melanin following inflammation – 14

Proliferation: a rapid increase in number – 1

Purple or dark brown: typical color of inflammation or scarring on darker skin – 12

Radiation: Using high-energy rays like x-rays to destroy skin cancer cells – 18, 19

Red or pink: Typical color of inflammation on lighter skin – 11

Retinoic acid: A skin product that reduces inflammation and evens skin tone – 14

Retinoids: compounds that increase skin cell turnover – 1

Sexually transmitted infections (STIs): A collection of infectious diseases primarily spread by sexual contact – 15, 16

Skin barrier: a protective layer on the surface of the skin that shields it from external stressors and maintains its health – 8

Skin cancer: A cancer that develops from the overgrowth of skin cells – 17–19, 22

Squamous cell carcinoma: A skin cancer that appears as a non-healing sore, a raised bump with a central depression, or a rough, scaly patch – 18

Topical corticosteroids: medications, like hydrocortisone, that are applied directly to the skin to treat inflammatory skin conditions – 8

Ulcers: open sores on the skin or inside the body that form when the top layer of skin or tissue breaks down and does not heal properly – 6

Ultraviolet Light: A type of light, invisible to the human eye, that is emitted from sources like the sun or tanning beds – 17

Urticaria (hives): Raised, itchy welts on the skin that are associated with allergic reactions – 20

Vitamin D analogues: modified versions of Vitamin D that regulate the growth of skin cells – 1

