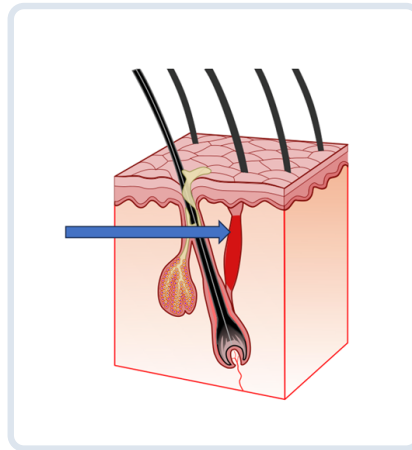


QUESTION

Identify the structures as marked in the image:



A Sebaceous glands

B Eccrine glands

C Errector pili muscle

CORRECT

D Apocrine glands

RIGHT ANSWER

OK C. Errector pili muscle

WHY THIS IS RIGHT

The structure attached obliquely to the hair follicle is the arrector pili muscle.

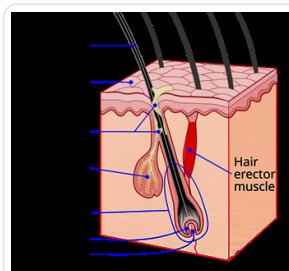
- Type: Smooth muscle
- Attachment: From dermis -> hair follicle
- Function:

- o Contraction causes hair to stand (piloerection -> "goosebumps")
- o Helps in sebum expulsion from sebaceous glands

Innervation: Sympathetic (autonomic nervous system)

Differentiation:

- Sebaceous glands -> sac-like, open into hair follicle
- Eccrine glands -> coiled tubular, open onto skin surface
- Apocrine glands -> large glands opening into hair follicles (axilla, groin)



QUESTION

A 24-year-old woman presents with recurrent painful nodules and foul-smelling discharge in the axilla. The lesions are located in areas rich in specialized sweat glands that become active after puberty and are associated with hair follicles. Which of the following sites predominantly contains these glands?

A Palms and soles

B Forehead

C Axilla

CORRECT

D Scalp

RIGHT ANSWER

OK C. Axilla

WHY THIS IS RIGHT

Why this is classic for apocrine glands:

- Location: Axilla, areola, anogenital region
- Secretion: Viscous, protein-rich -> odor after bacterial action
- Association: Open into hair follicles
- Activation: Puberty onward (androgen-dependent)
- Clinical correlate: Hidradenitis suppurativa (recurrent painful nodules, sinuses)

Option traps:

- A. Palms & soles -> Eccrine only (thermoregulation)
- B. Forehead -> Predominantly eccrine
- D. Scalp -> Mainly sebaceous + eccrine, not apocrine-dominant

QUESTION

Which of the following statements are correct?

- a. Epidermis can regenerate from deeper follicular cells such as hair follicles and sebaceous glands
- b. Stratum corneum is the outermost cellular layer
- c. Epidermis is ectodermal in origin
- d. Dermis and hypodermis are endodermal in origin

A a and b

B a and c

CORRECT

C b and c

D b and d

RIGHT ANSWER

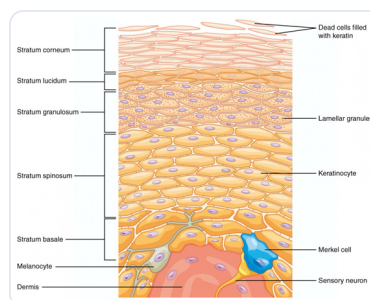
OK

B. a and c

WHY THIS IS RIGHT

The epidermis has the capacity to regenerate and has a distinct embryological origin.

- Regeneration: Epidermis can regenerate not only from basal keratinocytes but also from epithelial stem cells in adnexal structures (hair follicles, sebaceous glands) -> important in wound healing
- Embryology: Epidermis is derived from ectoderm
- Incorrect concepts:
 - Stratum corneum = outermost layer but consists of dead (anucleate) cells, so not a true “cellular” layer
 - Dermis and hypodermis arise from mesoderm, not endoderm



QUESTION

A 78-year-old woman presents with persistent dryness and itching on her chin for the past few weeks. Examination shows erythematous exfoliated patches. Which of the following structures is primarily responsible for lipid secretion and maintaining skin barrier function?

A Lamellar granules

CORRECT

B Birbeck's granules

C Keratohyalin granules

D Eleidin granules

RIGHT ANSWER

OK A. Lamellar granules

WHY THIS IS RIGHT

Lamellar granules (Odland bodies): found in keratinocytes of stratum granulosum.

- Function: Secrete lipids (cholesterol, free fatty acids) into the stratum corneum. ---> forming epidermal permeability barrier.
- This lipid layer prevents transepidermal water loss (TEWL) and keeps the skin hydrated--> normal barrier function.

The question describes dryness and exfoliation, which indicates barrier dysfunction.

- ##### *B. Birbeck granules*
- Function: *processing of antigen and immune response.-->* No role skin barrier formation.
- ##### *C. Keratohyalin granules*
- Function is keratin aggregation, not lipid secretion.
- ##### *D. Eleidin granules*
- Found in stratum lucidum (mainly in thick skin like palms and soles).
- Helps in keratinization of epidermal cells. --> no role in lipid secretion/ skin barrier formation.

*

QUESTION

| What is the ratio of type-I to type-III collagen in adult human skin?

A 4:1

B 3:2

C 1:4

D 8:1

CORRECT

RIGHT ANSWER

OK D. 8:1

WHY THIS IS RIGHT

In adult human skin, type I collagen is by far the predominant collagen in the dermis, providing tensile strength, while type III collagen is present in smaller amounts, contributing to elasticity and reticular support. The type I:type III collagen ratio in adult skin is approximately 8:1, reflecting the greater mechanical role of type I in mature dermis.

QUESTION

| The epidermal protein deficient in this patient is present in:



A Stratum spinosum

B Stratum corneum

C Stratum basale

D Stratum granulosum

CORRECT

RIGHT ANSWER

OK D. Stratum granulosum

WHY THIS IS RIGHT

The patient likely has pemphigus foliaceus, given superficial blisters, erythema in seborrheic areas, and IgG deposition on keratinocytes. The autoantibodies target desmoglein-1, which is most abundant in the stratum granulosum, the upper epidermal layers. Loss of desmoglein-1 causes superficial acantholysis, resulting in fragile, crusted erosions without mucosal involvement.

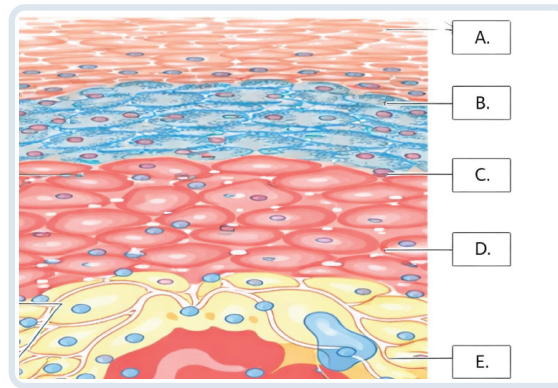
Why the other options are incorrect:

- A. Stratum spinosum - Site of desmoglein-3; defects lead to pemphigus vulgaris.
- B. Stratum corneum - Composed of dead keratinocytes; not the main site of desmosomal adhesion.
- C. Stratum basale - Basal layer keratinocytes; mutations here cause epidermolysis bullosa simplex.

QUESTION

Identify the layer involved in the following disease:

1. Pemphigus foliaceus
2. Ichthyosis
3. Pemphigus vulgaris
4. LCH
5. Vitiligo



A 1-C, 2-B, 3-D, 4-E, 5-E

B 1-C, 2-C, 3-D, 4-D, 5-E

CORRECT

C 1-D, 2-B, 3-B, 4-D, 5-D

D 1-D, 2-B, 3-E, 4-A, 5-D

RIGHT ANSWER

OK

B. 1-C, 2-C, 3-D, 4-D, 5-E

WHY THIS IS RIGHT

- 1\ Pemphigus foliaceus -> C (Stratum granulosum)
 - Autoantibody against Desmoglein-1
 - Dsg1 predominates in upper epidermis
 - Produces subcorneal blister
- 2\ Ichthyosis -> C (Stratum granulosum)
 - Defective keratinization
 - Often associated with abnormalities of keratohyalin granules
 - Hyperkeratosis involving upper epidermis
- 3\ Pemphigus vulgaris -> D (Stratum spinosum)
 - Autoantibody against Desmoglein-3
 - Suprabasal split
 - "Row of tombstones" appearance
- 4\ Langerhans Cell Histiocytosis (LCH) -> D (Stratum spinosum)
 - Langerhans cells reside mainly in stratum spinosum
- 5\ Vitiligo -> E (Stratum basale)
 - Loss of melanocytes
 - Melanocytes are located in basal layer

QUESTION

| Which of the following is a secondary skin lesion?

CORRECT

A

https://corebtr-assets-production.s3.ap-south-1.amazonaws.com/questions_image/option/01KMJ8GSQ2NZEJFD44DCYJV5H.jpg

B

https://corebtr-assets-production.s3.ap-south-1.amazonaws.com/questions_image/option/01KMJ8GSXAJ2CMT8D4BJJ0HME7.png

C

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D

https://corebtr-assets-production.s3.ap-south-1.amazonaws.com/questions_image/option/01KMJ8GT758AV3SVHBT3VSZG2P.png

RIGHT ANSWER

OK

A. https://corebtr-assets-production.s3.ap-south-1.amazonaws.com/questions_image/option/01KMJ8GSQ2NZEJFD44DCYJV5H.jpg

WHY THIS IS RIGHT

Primary lesions

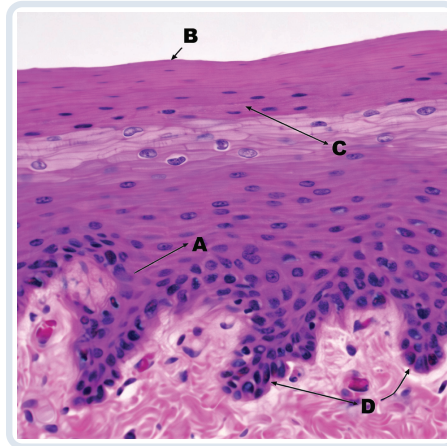
- Macule/ Papule/ Plaque (Option D)
- Nodule
- Vesicle/ Bulla
- Pustule (Option B)
- Wheal
- Purpura / Echymosis (Option C)

Secondary lesions

- Scale (Option A) / Crust
- Erosion/ Ulcer
- Scar
- Lichenification

QUESTION

Which cells are not present in the layer marked as D?



A Keratinocytes

B Merkel cells

C Melanocytes

D Langerhans cells

CORRECT

RIGHT ANSWER

OK D. Langerhans cells

WHY THIS IS RIGHT

Layer D in standard skin histology diagrams typically represents the stratum basale (stratum germinativum).

Cells present in Stratum Basale:

- Keratinocytes (basal stem cells - mitotically active)
- Melanocytes (neural crest-derived, pigment production)
- Merkel cells (mechanoreceptors)

Langerhans cells are antigen-presenting dendritic cells primarily located in the stratum spinosum (Layer A) not in the stratum basale. Layer B represents stratum corneum while Layer C is stratum granulosum.

QUESTION

Irregular pitting of the nails with subungual hyperkeratosis is seen in?

A Lichen planus

B Psoriasis

CORRECT

C Vitiligo

D Alopecia areata

RIGHT ANSWER

B. Psoriasis

WHY THIS IS RIGHT

Nail changes in psoriasis classically include irregular pitting and subungual hyperkeratosis.

- o Nail pitting -> irregular, coarse pits
- o Subungual hyperkeratosis -> debris under nail
- o Onycholysis (separation of nail plate)
- o "Oil drop / salmon patch" discoloration
- Pathophysiology:
 - o Involvement of nail matrix -> pitting
 - o Involvement of nail bed -> hyperkeratosis & onycholysis

Differentiation from others:

- Lichen planus: longitudinal ridging, thinning, pterygium
- Alopecia areata: fine, regular nail pitting (less coarse)
- Vitiligo: no nail changes



QUESTION

A 23-year-old male came with complaints of orange hue over the body with hyperkeratotic perifollicular erythematous papules associated with scaling, which started near the face and slowly progressed to involve the entire body. Islands of sparing noted over the body. Palmoplantar keratoderma noted. Histology shows alternating orthokeratosis and parakeratosis. What is the most likely diagnosis?



A Mycosis fungoides

B Follicular psoriasis

C Pityriasis Rubra Pilaris

CORRECT

D Keratosis follicularis

RIGHT ANSWER

OK

C. Pityriasis Rubra Pilaris

WHY THIS IS RIGHT

Pityriasis rubra pilaris (PRP) is characterized by orange-red scaling plaques with follicular hyperkeratosis and distinctive clinical-histological features.

• Key clinical features:

- o Orange/salmon-colored plaques
- o Follicular hyperkeratotic papules
- o "Islands of sparing" (normal skin within lesions)
- o Palmoplantar keratoderma
- Histopathology (hallmark):
 - o Alternating orthokeratosis and parakeratosis (checkerboard pattern)

Differentiation:

- Psoriasis -> silvery scales, Auspitz sign, uniform parakeratosis
- Mycosis fungoides -> atypical lymphocytes, epidermotropism
- Keratosis follicularis (Darier disease) -> greasy papules, acantholysis

QUESTION

A 52-year-old man presents with a persistent white, reticulated oral mucosal lesion over the inner cheek for the past 6 months. He reports that it burns on consuming spicy foods. He is currently on several medications since few months. Examination reveals bilateral white lacy plaques on the buccal mucosa without ulceration or scrapability. Which of the following medications is most likely responsible for this oral lesion?



- A** Lithium
- B** Beta blockers

CORRECT

C Fluconazole

D Ciprofloxacin

RIGHT ANSWER

B. Beta blockers

WHY THIS IS RIGHT

Bilateral white, lacy (reticular) lesions on buccal mucosa that are non-scrapable and cause burning are characteristic of oral lichen planus (Wickham striae).

- o Reticular white pattern (lace-like)
- o Bilateral symmetry
- o Non-scrapable
- o Burning sensation with spicy food
- Etiology:

- o Idiopathic or drug-induced (lichenoid reaction)
- Common drug triggers:

- o Beta blockers (most important here)
- o NSAIDs
- o ACE inhibitors
- o Antimalarials

Why not others:

- Fluconazole -> used to treat candidiasis (which is scrapable)
- Ciprofloxacin -> not classically associated
- Lithium -> more associated with psoriasis exacerbation

QUESTION

A young male, aged 24, has presented with asymptomatic scaly skin lesions on his back, symmetrically distributed. The provided images showcase the lesions. Can you identify the pattern of these skin lesions & the specific disease?



A Collarette scale - Christmas tree pattern - Pityriasis rosea

CORRECT

B Wickham's striae - Lichen planus

C Christmas tree pattern - Lichen planus

D Woronoff ring - Seborrheic dermatitis

RIGHT ANSWER

OK

A. Collarette scale - Christmas tree pattern - Pityriasis rosea

WHY THIS IS RIGHT

Pityriasis rosea presents with characteristic morphology + distribution pattern that helps in clinical diagnosis.

- Primary lesion (Herald patch):

- o Single large oval plaque
- o Collarette scale (fine scale at inner margin)

- Secondary eruption:

- o Multiple smaller lesions
- o Arranged along Langer's lines -> "Christmas tree pattern" on back
- Nature: Self-limiting, often viral (HHV-6/7 association)

Key differentiations:

- Wickham striae -> Lichen planus
- Seborrheic dermatitis -> greasy scales in seborrheic areas
- Christmas tree pattern is classic for Pityriasis rosea

QUESTION

A 35-year-old man comes to the OPD due to skin lesions on his knees for the past several months. The lesions began as small papules and gradually increased in size but are not painful or itchy. Which of the following is the most appropriate management for this patient's skin lesions?



A Allergen avoidance

B Gluten-free diet

C Topical antifungal

D Topical glucocorticoid

CORRECT

RIGHT ANSWER

OK

D. Topical glucocorticoid

WHY THIS IS RIGHT

This patient's chronic, slowly enlarging, non-itchy, non-painful papules on the knees are most consistent with plaque psoriasis, which commonly involves extensor surfaces (knees, elbows). Psoriasis is an immune-mediated disorder with increased keratinocyte proliferation. Topical glucocorticoids are first-line therapy for localized disease, as they reduce inflammation, suppress T-cell activity, and slow epidermal turnover, leading to flattening of plaques.

Why the other options are incorrect:

- A. Allergen avoidance - Relevant for allergic contact dermatitis, which is pruritic and acute.
- B. Gluten-free diet - Used in dermatitis herpetiformis, which is intensely itchy.
- C. Topical antifungal - Used for tinea, which is usually pruritic with central clearing.

QUESTION

Match the following scale types with their lesions:

Scales	Disease
1. Collarette scales	a. Pityriasis versicolor
2. Silvery scales	b. Pityriasis Rosea
3. Mica like scales	c. Psoriasis
4. Branny scales	d. Pityriasis lichenoides chronica

A 1-b, 2-c, 3-d, 4-a

CORRECT

B 1-a, 2-b, 3-d, 4-c

C 1-d, 2-c, 3-a, 4-b

D 1-c, 2-b, 3-d, 4-a

RIGHT ANSWER

OK A. 1-b, 2-c, 3-d, 4-a

WHY THIS IS RIGHT

- 1\ Collarette scale -> b) Pityriasis rosea
 - Collarette scaling (peripheral scaling with central clearing) is classic for the herald patch of pityriasis rosea.
- 2\ Silvery scale -> c) Psoriasis
 - Psoriasis shows thick, silvery-white scales due to rapid epidermal turnover and parakeratosis.
- 3\ Mica-like scale -> d) Pityriasis lichenoides chronica
 - PLC lesions have thin, shiny, mica-like adherent scales over papules.
- 4\ Branny scale -> a) Pityriasis versicolor
 - Fine, furfuraceous (branny) scales are characteristic of Malassezia infection.

QUESTION

A diabetic patient presents with whitish plaques in the oral cavity. A KOH mount of the lesion reveals budding yeast cells with pseudohyphae. Which of the following culture media is most appropriate for isolation of this organism?



A Chocolate agar

B Sabouraud's Dextrose Agar (SDA)

CORRECT

C Thayer-Martin medium

D Loeffler's serum slope

RIGHT ANSWER

OK

B. Sabouraud's Dextrose Agar (SDA)

WHY THIS IS RIGHT

Whitish scrapable plaques in the oral cavity with KOH showing budding yeast cells and pseudohyphae indicate Oral candidiasis most commonly due to *Candida albicans*

The most appropriate culture medium for isolation is Sabouraud's Dextrose Agar.

- *Candida* shows budding yeast with pseudohyphae on KOH mount
- Common in diabetics, immunocompromised patients, and after antibiotics
- Lesions are white and scrapable, leaving an erythematous base
- Sabouraud's dextrose agar is selective for fungi due to acidic pH
- Why not others:
- Chocolate agar is for fastidious bacteria
- Thayer-Martin medium is for *Neisseria* species
- Loeffler's serum slope is for *Corynebacterium diphtheriae*

QUESTION

A 4-year-old child is brought to the pediatric OPD with complaints of low-grade fever, poor appetite, and a sore throat for the past 2 days. On examination, there are multiple vesicular lesions on the palms, soles, and oral mucosa. The child attends daycare, and several other children have similar complaints. Neurological examination is normal. Which of the following is the most likely etiological agent?



A Human herpesvirus 6

B Coxsackievirus A16

CORRECT

C Varicella-zoster virus

D Parvo virus

RIGHT ANSWER

OK B. Coxsackievirus A16

WHY THIS IS RIGHT

A child with low-grade fever, sore throat, and vesicular lesions on the palms, soles, and oral mucosa is characteristic of Hand, foot and mouth disease.

The most common causative agent is Coxsackievirus A16.

- Transmitted via fecal-oral and respiratory routes, common in daycare settings
- Presents with vesicles on hands, feet, and oral ulcers
- Usually mild and self-limiting
- Can also be caused by Enterovirus 71 (more severe disease)
- Why not others:
 - Human herpesvirus 6 causes roseola (rash after fever)
 - Varicella-zoster virus causes generalized vesicular rash in different stages
 - Parvovirus B19 causes slapped cheek rash

QUESTION

A patient with borderline tuberculoid leprosy presents with clinical finding, as shown in the image. Which type of hypersensitivity reaction is involved in this condition?



A Type 1

B Type 2

C Type 3

D Type 4

CORRECT

RIGHT ANSWER

OK

D. Type 4

WHY THIS IS RIGHT

In Borderline tuberculoid leprosy, there is a strong cell-mediated immune response producing a Type IV hypersensitivity. This leads to granulomatous inflammation and destruction of peripheral nerves, resulting in palpable nerve thickening and sensory loss.

The nerve typically enlarged in lesions around the ear and neck region is the Greater auricular nerve.

Key points:

- Borderline tuberculoid leprosy shows strong cell-mediated immunity
- Type IV hypersensitivity causes nerve damage
- Nerve thickening is a cardinal sign
- Commonly involved nerves: greater auricular, ulnar, common peroneal

Thus, the correct concept is Type IV hypersensitivity with enlargement of the greater auricular nerve.

QUESTION

A 35-year-old patient presents with fever and malaise after returning from a recent forest trip. On examination, a black necrotic lesion is noted on the abdomen, as shown in the image. Which of the following is the drug of choice for this condition?



- A Penicillin
- B Doxycycline**
- C Ceftriaxone
- D Artesunate

CORRECT

RIGHT ANSWER

OK **B. Doxycycline**

WHY THIS IS RIGHT

- The presence of a painless black necrotic eschar is highly characteristic of Scrub typhus.
- Caused by *Orientia tsutsugamushi*, transmitted by chigger (mite) bites
- Common in forested / rural areas (India = endemic)

Drug of Choice:

- Doxycycline -> first-line treatment
- Rapid clinical response is typical (fever subsides within 48 hrs)

Why not others:

- Penicillin -> ineffective (not active against intracellular organisms)
- Ceftriaxone -> not useful for rickettsial infections
- Artesunate -> used in malaria, not rickettsial diseases

QUESTION

A 6-year-old child presents with multiple small, skin-colored papules with central umbilication over the trunk and face. What is the most likely diagnosis?



A Verruca vulgaris

B Molluscum contagiosum virus

CORRECT

C Varicella

D Impetigo

RIGHT ANSWER

OK

B. Molluscum contagiosum virus

WHY THIS IS RIGHT

Multiple skin-colored papules with central umbilication in a child are characteristic of Molluscum contagiosum (Poxvirus infection).

- Etiology: Caused by Molluscum contagiosum virus (Poxvirus)
- Classic clinical features:

- o Small, pearly dome-shaped papules
- o Central umbilication (dimple) -> key diagnostic clue
- o Common on face, trunk, extremities in children
- Pathology: Henderson-Patterson bodies (intracytoplasmic inclusion bodies)
- Transmission:
 - o Direct skin-to-skin contact
 - o Autoinoculation (scratching)

Why not others:

- o Verruca vulgaris -> rough, hyperkeratotic warts (no umbilication)
- o Varicella -> vesicular lesions in different stages
- o Impetigo -> honey-colored crusted lesions

QUESTION

A patient presents with an BT leprosy lesion on the face as shown in the image below. Which of the following nerves is most commonly involved in this condition?



A Facial nerve

CORRECT

B Trigeminal nerve

C Abducens nerve

D Optic nerve

RIGHT ANSWER

OK

A. Facial nerve

WHY THIS IS RIGHT

In facial lesions of borderline tuberculoid (BT) leprosy, the most commonly involved nerve is the facial nerve (especially its branches).

- o Leprosy affects cooler peripheral nerves
- o On the face -> facial nerve involvement is common
- o Weakness of facial muscles
- o Lagophthalmos (inability to close eye) -> risk of exposure keratitis
- o Loss of facial expression on affected side

Other commonly involved nerves in leprosy (general):

- o Ulnar nerve (most common overall)
- o Common peroneal nerve
- o Posterior tibial nerve
- o Greater auricular nerve

Why not others:

- o Trigeminal nerve -> sensory, less commonly emphasized vs facial motor deficits
- o Abducens & optic -> not involved in leprosy

QUESTION

The farmer presents with a cauliflower-like mass on the foot, which developed after a minor injury, as depicted in the image. Microscopic examination reveals the presence of copper penny bodies. Based on this information, what is the most probable diagnosis?



A Chromoblastomycosis

CORRECT

B Blastomycosis

C Sporotrichosis

D Phaeohyphomycosis

RIGHT ANSWER

OK

A. Chromoblastomycosis

WHY THIS IS RIGHT

Chromoblastomycosis is a chronic subcutaneous fungal infection characterized by “copper penny bodies” (sclerotic bodies) on microscopy.

- Etiology: Dematiaceous (pigmented) fungi e.g., *Fonsecaea*, *Cladosporium*
- Mode of infection: Traumatic implantation (e.g., thorn/prick injury in farmers)
- Clinical features:

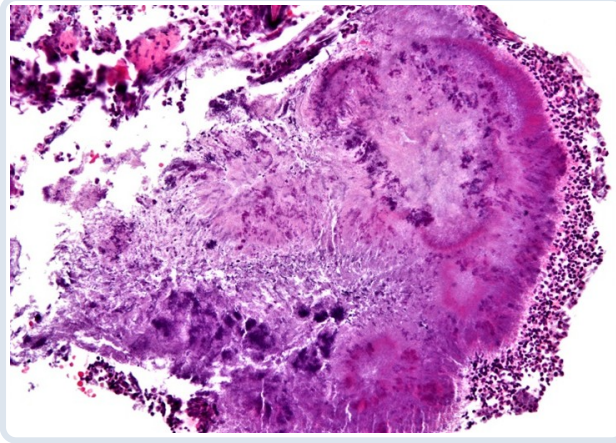
- o Slowly progressive verrucous / cauliflower-like lesion
- o Commonly affects feet and lower limbs
- Diagnostic hallmark (VERY HIGH-YIELD):

- o Copper penny bodies / Medlar bodies
- o Thick-walled, brown, round fungal cells
- Why not others:

- o Blastomycosis -> systemic fungal infection, not copper penny bodies
- o Sporotrichosis -> lymphatic spread (“rose gardener’s disease”)
- o Phaeohyphomycosis -> pigmented hyphae, no sclerotic bodies

QUESTION

A farmer visits you with a foot swelling and multiple discharging sinuses in the lower limb. Microscopic examination of granules from the discharge was performed and is as shown in the image below. Based on this information, what can be concluded about this condition?



A There is lymphocyte accumulation

B Both bacteria and fungi can be causative

CORRECT

C Undergoes lymphatic spread

D Involves only superficial tissues

RIGHT ANSWER

OK B. Both bacteria and fungi can be causative

WHY THIS IS RIGHT

Chronic foot swelling with multiple discharging sinuses and granules = Mycetoma.

Mycetoma can be caused by both:

o Bacteria -> Actinomycetoma (e.g., Nocardia, Actinomyces)

o Fungi -> Eumycetoma (true fungi)

• Clinical triad:

1. Tumefaction (swelling)

2. Multiple sinus tracts

3. Granule discharge (colored grains)

• Important distinctions:

o Actinomycetoma: finer filaments, responds to antibiotics

o Eumycetoma: thicker hyphae, needs antifungals ± surgery

• Why other options are wrong:

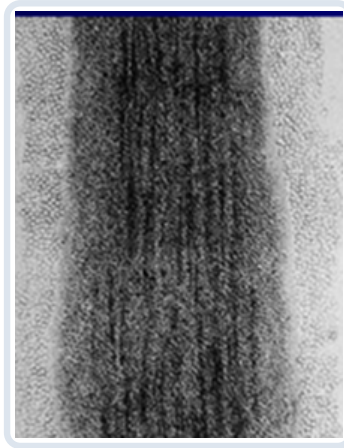
o Lymphocyte accumulation -> not defining feature

o Lymphatic spread -> seen in sporotrichosis, not mycetoma

Superficial only -> incorrect (can involve deep tissues & bone)

QUESTION

A hair shaft with arthroconidia is seen in the image below. Identify the fungi associated with it?



A Trichosporon

B Microsporum

CORRECT

C Candida

D Epidermophyton

RIGHT ANSWER

OK

B. Microsporum

WHY THIS IS RIGHT

Arthroconidia within/around the hair shaft indicate a dermatophyte infection of hair (tinea capitis).

- Causative organism: Microsporum species (classically shows ectothrix infection)
- Key feature:

o Arthroconidia (spores) coating the outside of hair shaft -> ectothrix pattern

Patterns of hair invasion:

- Ectothrix (outside hair): Microsporum
- Endothrix (inside hair): Trichophyton

Why not others:

- Trichosporon -> white piedra (nodules on hair)
- Candida -> yeast with pseudohyphae, not arthroconidia in hair
- Epidermophyton -> infects skin/nails, not hair

QUESTION

A 57-year-old person completed his treatment of leprosy. Two years later, he presents with a punched-out painless ulcer on his sole. What is the next best step in the management?



CORRECT

A Ask him to bear less weight on that leg and use plaster casts

B Restart MDT

C Aggressive Debridement with IV antibiotics

D Amputation

RIGHT ANSWER

OK

A. Ask him to bear less weight on that leg and use plaster casts

WHY THIS IS RIGHT

A painless, punched-out plantar ulcer in a treated leprosy patient is a trophic (neuropathic) ulcer due to loss of protective sensation.

- Pathogenesis:

- o Peripheral nerve damage -> sensory loss
- o Repeated trauma/pressure -> ulcer formation
- Key management (most important):

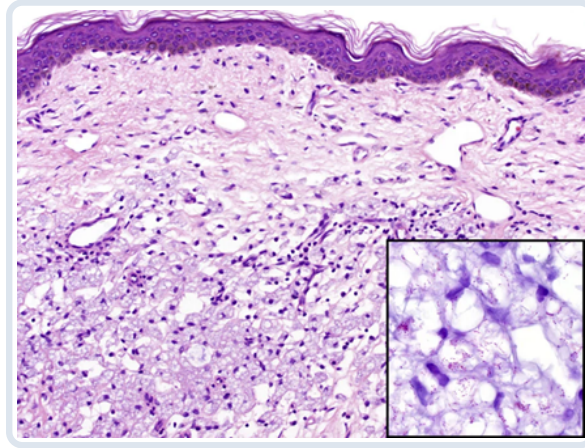
- o Offloading pressure -> rest, plaster cast / special footwear
- o Prevent further trauma -> cornerstone of treatment

Why not others:

- Restart MDT -> not relapse (no active infection signs)
- Debridement/IV antibiotics -> only if secondary infection
- Amputation -> last resort

QUESTION

A patient presented with nodular lesions over the body, which are associated with slight anesthesia over the arm in the ulnar nerve distribution. Histopathology is as shown below. Which of the following options is true about this condition?



- A** Lepromatous leprosy with positive Lepromin test
- B** Tuberculoid leprosy with positive Lepromin test
- C** Lepromatous leprosy with negative Lepromin test
- D** ENL with negative Lepromin test

CORRECT

RIGHT ANSWER

- OK** C. Lepromatous leprosy with negative Lepromin test

WHY THIS IS RIGHT

Presence of multiple nodular lesions with sensory loss and histology showing Grenz zone + foamy macrophages (Virchow cells) filled with bacilli (globi) is diagnostic of lepromatous leprosy.

• Histopathological hallmarks:

- o Grenz zone (clear subepidermal zone)
- o Virchow cells (foamy macrophages) containing numerous *Mycobacterium leprae*
- o Globi (clusters of bacilli)

• Immunology:

- o Poor cell-mediated immunity (Th2 response)
- o Lepromin test -> negative

• Clinical features:

- o Multiple symmetric lesions
- o Diffuse involvement (skin + nerves)
- o Mild sensory loss (compared to tuberculoid)

Differentiation:

- Tuberculoid leprosy -> strong immunity, granulomas, lepromin positive
- ENL -> reactional state, not primary pathology

QUESTION

A farmer with a history of prick injury came with the complaint: swelling of the foot with sinus tracts showing pus discharge, which showed white granules and gram-positive filamentous structures were noted on microscopy. What is the most likely causative organism associated?

A Sporothrix schenckii

B Staphylococcus aureus

C **Nocardia brasiliensis**

CORRECT

D Aspergillus

RIGHT ANSWER

OK

C. Nocardia brasiliensis

WHY THIS IS RIGHT

A farmer with prick injury -> chronic swelling of foot + multiple sinus tracts + granular discharge ("grains") is typical of mycetoma (Madura foot).

- White granules + gram-positive filamentous bacteria -> Actinomycetoma
- Causative organism: Nocardia brasiliensis (aerobic, weakly acid-fast, gram-positive filamentous bacteria)

Types of mycetoma:

- Actinomycetoma (bacterial):

- o Nocardia, Actinomadura
- o White/yellow granules
- Eumycetoma (fungal):

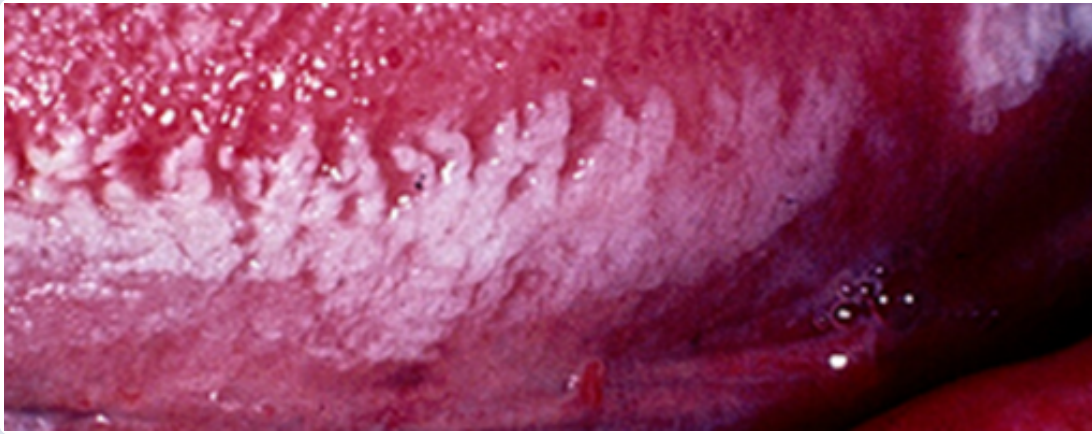
- o Madurella mycetomatis
- o Black granules

Why not others:

- Sporothrix -> sporotrichosis (lymphocutaneous spread)
- Staphylococcus -> abscess, no granules
- Aspergillus -> not typical mycetoma cause here

QUESTION

An immunocompromised patient presents with the following lesion on the lateral aspect of the tongue as shown in the image below. This white membrane was not scrapeable with a gauze piece. What is the diagnosis?



A Oral hairy Leukoplakia

CORRECT

B Lichen planus

C Lichen Sclerosus

D Candidiasis

RIGHT ANSWER

OK

A. Oral hairy Leukoplakia

WHY THIS IS RIGHT

In an immunocompromised patient, a white, non-scrapable lesion on the lateral border of the tongue is characteristic of oral hairy leukoplakia.

- Etiology: Epstein-Barr virus (EBV) infection
- Common association: HIV/AIDS or other immunosuppressed states
- Location: Lateral margins of tongue (classic site)
- Appearance: White, corrugated ("hairy") plaque
- Key feature: Not scrapable

Differentiation:

- Candidiasis -> white plaques scrapable (leave erythematous base)
- Lichen planus -> Wickham striae (lace-like pattern)
- Lichen sclerosus -> genital involvement, not oral tongue

QUESTION

| Which of the following drugs in leprosy treatment cause hyperpigmentation?

A Dapsone

B Ofloxacin

C Rifampicin

D Clofazimine

CORRECT

RIGHT ANSWER

OK D. Clofazimine

WHY THIS IS RIGHT

Clofazimine, a key drug in multibacillary leprosy (MDT), characteristically causes skin hyperpigmentation.

- Type of pigmentation: Red brown to black discoloration
- Mechanism: Drug deposition in skin and macrophages
- Clinical relevance: May lead to cosmetic concern and poor compliance

Other drug effects (for contrast):

- Dapsone -> hemolysis (especially in G6PD deficiency), methemoglobinemia
- Rifampicin -> orange discoloration of body fluids
- Ofloxacin -> GI/CNS side effects (no pigmentation)

QUESTION

A 42-year-old male farmer from a rural hilly region of Himachal Pradesh presents with a slowly progressive swelling of the foot over 1 year. He reports walking barefoot regularly. Examination reveals a painless, firm swelling with multiple discharging sinuses exuding black granules. Which of the following is the most likely causative organism?

A *Madurella mycetomatis*

CORRECT

B *Cryptococcus neoformans*

C *Toxocara canis*

D *Coccidioides immitis*

RIGHT ANSWER

OK **A. *Madurella mycetomatis***

WHY THIS IS RIGHT

Walking barefoot in soil (e.g., gardeners, farmers) predisposes to traumatic implantation of fungi, leading to mycetoma (Madura foot).

- Causative organism: *Madurella mycetomatis* (fungal eumycetoma)
- Mode of infection: Entry through minor trauma (thorns, splinters)
- Clinical triad:
 - Tumefaction (swelling)
 - Multiple sinus tracts
 - Discharge with granules ("grains")

Why not others:

- Cryptococcosis -> inhalation (lungs/CNS), not via foot trauma
- *Toxocara canis* -> visceral/ocular larva migrans (ingestion of eggs)
- *Coccidioides immitis* -> inhalation causing pulmonary infection

QUESTION

| Nail lacquer used in treatment of Onychomycosis among the given options:

A Griseofulvin

B **Tavaborole**

CORRECT

C Caspofungin

D Itraconazole

RIGHT ANSWER

OK

B. Tavaborole

WHY THIS IS RIGHT

Onychomycosis (fungal nail infection) can be treated with topical nail lacquers in mild or superficial disease.\

- Tavaborole -> a topical nail lacquer (oxaborole antifungal) that inhibits fungal protein synthesis
- Applied directly to the nail -> good for distal/subungual mild infections

Drug classification:

- Topical nail lacquer: Tavaborole
- Systemic therapy (moderate-severe cases): Itraconazole, Griseofulvin
- Not used for onychomycosis: Caspofungin (IV echinocandin for systemic fungal infections)

QUESTION

A 4-month-old infant is brought to the dermatology OPD with intense itching, especially at night. On examination, there are multiple excoriated papules and burrows seen over the palms, soles, and trunk. A clinical diagnosis of scabies is made. The pediatrician plans to initiate topical therapy. Which of the following drugs are appropriate and safe for use in infants with scabies?

1. Permethrin 5% cream
2. Benzyl benzoate 25% lotion
3. Crotamiton 10% cream
4. Ivermectin

A 1 and 2

B 1, 3 and 4

C 1 and 3

CORRECT

D 2 and 4

RIGHT ANSWER

OK C. 1 and 3

WHY THIS IS RIGHT

The source quiz contains the placeholder "\$19" here and does not include a written explanation for this item.

QUESTION

Which of the following best describes the histopathology of Erythema Induratum (Bazin)?

- A Septal panniculitis without vasculitis
- B Lobular panniculitis with vasculitis**
- C Dermatitis with neutrophilic abscess
- D Subepidermal blister with IgG deposition

CORRECT

RIGHT ANSWER

- OK
- B. Lobular panniculitis with vasculitis**

WHY THIS IS RIGHT

Erythema induratum of Bazin is considered a tuberculid, and it characteristically shows:

- Lobular panniculitis
- Granulomatous infiltrate
- Vasculitis of medium-sized vessels
- May ulcerate and heal with scars
- Usually on posterior legs (calves)

QUESTION

A 22-year-old male presents with an ulcerated sinus over the side of the neck with underlying matted cervical lymph nodes. What is the route of spread in this form of TB?



A Hematogenous

B Lymphatic

C Direct extension

CORRECT

D Inhalational

RIGHT ANSWER

OK

C. Direct extension

WHY THIS IS RIGHT

In scrofula (cervical tuberculous lymphadenitis), especially in adults, the ulcerated sinus over the neck with matted lymph nodes often results from direct extension of infection from an underlying lymph node to the overlying skin, leading to sinus formation. This is why the route of spread in this form of TB is considered direct extension from infected nodes rather than hematogenous or purely lymphatic dissemination.

Why the other options are incorrect:

- A. Hematogenous - Causes miliary TB; systemic, not localized cervical ulcers.
- B. Lymphatic - TB can spread via lymphatics to nodes, but the sinus to skin connection represents direct extension.
- D. Inhalational - Primary route for pulmonary TB; does not directly cause cervical skin ulceration.

QUESTION

I All are true regarding lupus vulgaris, except:

- A** It is a form of cutaneous tuberculosis seen in previously sensitized individuals
- B** Originates from an underlying focus of tuberculosis
- C** Most common site in India is the buttock and trunk
- D** Shows large numbers of acid-fast bacilli on biopsy

CORRECT

RIGHT ANSWER

OK

D. Shows large numbers of acid-fast bacilli on biopsy

WHY THIS IS RIGHT

Lupus vulgaris is a chronic, progressive form of cutaneous tuberculosis that occurs in previously sensitized individuals. Key points:

- A. It is a form of cutaneous tuberculosis seen in previously sensitized individuals. True - Occurs in previously sensitized individuals (type IV hypersensitivity).
- B. Originates from an underlying focus of tuberculosis. True - Often from contiguous focus of TB (bone, lymph nodes, lungs) or hematogenous spread.
- C. Most common site in India is the buttock and trunk. True - In India, common sites are face, neck, and extremities; buttock/trunk is less common.
- D. Shows large numbers of acid-fast bacilli on biopsy. False - Lupus vulgaris is paucibacillary, meaning few or no acid-fast bacilli are seen on biopsy.

Why the other options are correct:

- The disease is slow-growing, chronic, and shows granulomatous inflammation, but AFB are rarely demonstrable.

QUESTION

A 32-year-old man with lepromatous leprosy presents with sudden onset of painful erythematous nodules over the face and extremities, accompanied by fever, malaise, and arthralgia. Examination shows multiple tender subcutaneous nodules. Laboratory tests reveal neutrophilia and elevated ESR. He also has orchitis and lymphadenitis. This condition is caused by:

A Type II hypersensitivity

B Type III hypersensitivity

CORRECT

C Type IV hypersensitivity

D Type V hypersensitivity

RIGHT ANSWER

OK B. Type III hypersensitivity

WHY THIS IS RIGHT

This patient has erythema nodosum leprosum (ENL), a type 2 lepra reaction, seen in lepromatous leprosy. Key features include:

- Sudden onset of tender erythematous nodules on face and extremities
- Systemic symptoms: fever, malaise, arthralgia
- Multisystem involvement: orchitis, lymphadenitis, eye involvement
- Laboratory: neutrophilia, elevated ESR

Pathophysiology:

- ENL is caused by immune complex deposition (antigen-antibody complexes) in tissues, activating complement and neutrophils -> Type III hypersensitivity reaction.

QUESTION

A known case of leprosy presents with new-onset painful lesions as shown below. Which of the following statements is false about this condition?



- A** It may occur after completion of treatment
- B** It is more common in tuberculoid type of leprosy
- C** It occurs due to immune complex deposition
- D** Keratitis, uveitis, dactylitis and orchitis may occur

CORRECT

RIGHT ANSWER

- B. It is more common in tuberculoid type of leprosy**

WHY THIS IS RIGHT

The patient is experiencing a type 2 lepra reaction (erythema nodosum leprosum, ENL), suggested by new painful nodular lesions in a known leprosy patient. Key points:

- Occurrence: Can occur during treatment or even after completion of MDT (A - true).
- Type prevalence: ENL is more common in lepromatous leprosy, not tuberculoid (B - false).
- Pathophysiology: Mediated by immune complex deposition -> inflammation, fever, malaise (C - true).
- Systemic involvement: Keratitis, uveitis, dactylitis, orchitis may occur due to widespread immune-mediated inflammation (D - true).

QUESTION

In a leprosy patient's smear showing 1-10 Bacilli per field, the bacteriological index is:

A 1+

B 2+

C 3+

CORRECT

D 4+

RIGHT ANSWER

OK C. 3+

WHY THIS IS RIGHT

In leprosy, the bacteriological index (BI) measures the density of *Mycobacterium leprae* in slit-skin smears on a logarithmic scale:

- 1+ -> 1-10 bacilli per 100 fields
- 2+ -> 1-10 bacilli per 10 fields
- 3+ -> 1-10 bacilli per field (Correct)
- 4+ -> 10-100 bacilli per field
- 5+ -> 100-1000 bacilli per field
- 6+ -> >1000 bacilli per field

So a smear showing 1-10 bacilli per field corresponds to BI = 3+.

QUESTION

Which of the following is the vector of Chiclero ulcer (new world leishmaniasis)?

- A Reduviid
- B Phlebotomus
- C Trombiculid
- D **Lutzomyia**

CORRECT

RIGHT ANSWER

- OK
- D. Lutzomyia**

WHY THIS IS RIGHT

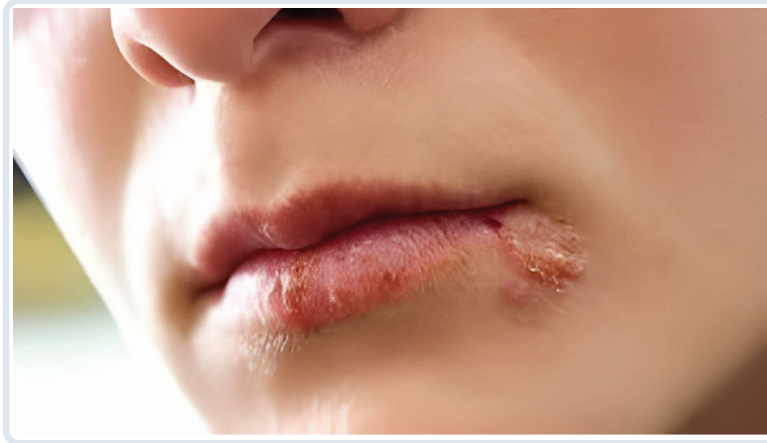
Chiclero ulcer is a form of New World cutaneous leishmaniasis, most commonly caused by *Leishmania mexicana* in Central America. The vector is the sandfly genus *Lutzomyia*, which transmits the parasite through its bite.

Why the other options are incorrect:

- A. Reduviid - Triatomine bugs; vector for *Trypanosoma cruzi* (Chagas disease).
- B. Phlebotomus - Old World sandfly vector for *Leishmania donovani* and *L. tropica*.
- C. Trombiculid - Chiggers; vectors for scrub typhus (*Orientia tsutsugamushi*).

QUESTION

A 36-year-old woman comes to the clinic with a 4-day history of fever and painful vesicular lesions around her lips, as shown in the image. What is the most probable diagnosis?



A Hand, foot, and mouth disease

B Warts

C Herpes zoster

D Cold sore

CORRECT

RIGHT ANSWER

OK

D. Cold sore

WHY THIS IS RIGHT

This patient has painful vesicular lesions around the lips with fever of short duration, which is classic for herpes labialis, caused by Herpes simplex virus type 1 (HSV-1). Lesions typically begin as grouped vesicles on an erythematous base, are painful, may crust over, and often recur due to reactivation of latent virus in the trigeminal ganglion, especially during stress or febrile illness.

Why the other options are incorrect:

- A. Hand, foot, and mouth disease - Causes oral ulcers plus lesions on hands and feet, usually in children.
- B. Warts - Caused by HPV; painless, hyperkeratotic, non-vesicular.
- C. Herpes zoster - Dermatomal distribution, not localized to lips.

QUESTION

| **Espundia refers to:**

- A** Cutaneous leishmaniasis
- B** Post-kala-azar dermal leishmaniasis
- C** **Mucocutaneous leishmaniasis**
- D** Visceral leishmaniasis

CORRECT

RIGHT ANSWER

- OK** **C. Mucocutaneous leishmaniasis**

WHY THIS IS RIGHT

Espundia is the term used for mucocutaneous leishmaniasis, classically caused by *Leishmania braziliensis* in the New World. It typically begins as a cutaneous lesion and later spreads to involve the mucous membranes of the nose, mouth, and pharynx, leading to destructive ulceration and tissue loss.

Why the other options are incorrect:

- A. Cutaneous leishmaniasis - Causes localized skin ulcers (e.g., oriental sore), not Espundia.
- B. Post-kala-azar dermal leishmaniasis (PKDL) - Occurs after visceral leishmaniasis; presents with hypopigmented macules/nodules.
- D. Visceral leishmaniasis - Kala-azar with fever, hepatosplenomegaly, and pancytopenia.

QUESTION

A 63-year-old man comes to the physician because of a 2-day history of a painful rash on his right flank. Two years ago, he underwent cadaveric renal transplantation. Current medications include tacrolimus, mycophenolate mofetil, and prednisone. Examination shows an erythematous rash with grouped vesicles in a band-like distribution over the patient's right flank. This patient is at greatest risk for which of the following complications?

A Sensory neuropathy

CORRECT

B Ascending paralysis

C Urinary retention

D Loss of vision

RIGHT ANSWER

OK A. Sensory neuropathy

WHY THIS IS RIGHT

This patient has herpes zoster (shingles), indicated by a painful, unilateral, dermatomal vesicular rash. His immunosuppressed state (renal transplant on tacrolimus, mycophenolate, prednisone) increases the risk of complications. The most common and greatest risk complication of herpes zoster-especially in older or immunocompromised patients-is postherpetic neuralgia, a form of chronic sensory neuropathy due to VZV- induced nerve damage. It presents as persistent burning or stabbing pain in the affected dermatome after rash resolution.

Why the other options are incorrect:

B. Ascending paralysis - Suggestive of Guillain-Barré syndrome, more often linked to Campylobacter or CMV.

C. Urinary retention - Occurs with sacral (S2-S4) zoster, not flank involvement.

D. Loss of vision - Seen in herpes zoster ophthalmicus (V1), not thoracic dermatomes.

QUESTION

A 64-year-old man comes to the emergency department due to worsening left lower extremity pain, swelling, and redness over the past 3 days. The patient has had no trauma but reports feeling feverish. Medical history is significant for hypertension and obesity. Physical examination shows diffuse erythema extending up to the left midcalf with indistinct border. There is increased warmth, tenderness, and edema of the left leg. No areas of fluctuation or purulent exudate are present, but the interdigital skin of the feet is macerated and fissured. Laboratory testing shows neutrophilic leukocytosis, and Doppler ultrasonography is negative for deep venous thrombosis. Infection with which of the following organisms is most likely responsible for this patient's current symptoms?

A Beta-hemolytic streptococci

CORRECT

B *Candida albicans*

C *Clostridium perfringens*

D *Mycobacterium marinum*

RIGHT ANSWER

OK **A. Beta-hemolytic streptococci**

WHY THIS IS RIGHT

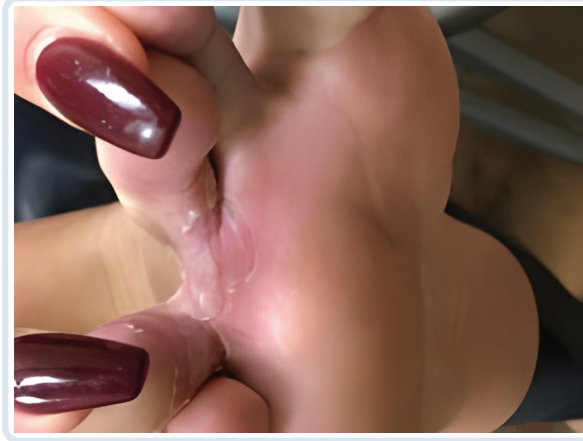
This patient has acute cellulitis, suggested by diffuse erythema with indistinct borders, warmth, tenderness, edema, fever, and neutrophilic leukocytosis. The presence of macerated, fissured interdigital skin indicates tinea pedis, a common portal of entry for bacteria. Beta-hemolytic streptococci (especially *Streptococcus pyogenes*) are the most common cause of nonpurulent cellulitis, as they spread rapidly through dermis and subcutaneous tissue via lymphatics, producing ill-defined margins.

Why the other options are incorrect:

- B. *Candida albicans* - Causes intertrigo or mucocutaneous candidiasis, not acute cellulitis.
- C. *Clostridium perfringens* - Causes gas gangrene with severe pain, crepitus, and tissue necrosis after trauma.
- D. *Mycobacterium marinum* - Causes chronic nodular skin lesions after aquatic exposure, not acute spreading erythema.

QUESTION

17-year-old girl comes to the OPD due to a rash. She joined the high school cross country running team 2 months ago and has had a progressive itchy rash on her feet since that time. The patient tried replacing her running shoes and socks, but the symptoms continued. Examination findings are shown in the image below. Which of the following is the most appropriate treatment for this patient's condition?



A Cephalexin capsules

B Miconazole cream

CORRECT

C Nystatin powder

D Permethrin cream

RIGHT ANSWER

OK B. Miconazole cream

WHY THIS IS RIGHT

This patient has tinea pedis (athlete's foot). Key clues include progressive pruritic rash on the feet, onset after starting cross-country running, and persistence despite changing shoes/ socks. Tinea pedis is a dermatophyte (*Trichophyton*) infection favored by moist, occlusive footwear. First-line treatment is a topical antifungal, such as an azole (miconazole) or an allylamine, applied for several weeks.

Why the other options are incorrect:

- A. Cephalexin capsules - Used for bacterial skin infections (eg, cellulitis), not fungal rashes.
- C. Nystatin powder - Effective against *Candida*, but dermatophytes are resistant.
- D. Permethrin cream - Used for scabies or lice, not tinea.

QUESTION

42-year-old man comes to the office due to an itchy rash. The rash began 3 months ago during the summer since then has enlarged and spread across his back, chest, and abdomen. The patient has attempted treatment with topical emollients and over-the-counter hydrocortisone cream without relief. Examination reveals scaly, annular plaques, as shown in the exhibit. In addition to appropriate measures for treatment of the rash, which of the following should be done at this time?



A Antinuclear antibody assay

B Hepatitis B serology

C HIV screening test

CORRECT

D Rule out beta blocker usage

RIGHT ANSWER

OK

C. HIV screening test

WHY THIS IS RIGHT

This patient has chronic, pruritic, scaly annular plaques that began in summer and have progressively enlarged and spread, with no response to topical steroids. This presentation is most consistent with extensive dermatophytosis (tinea corporis). Widespread, persistent, or steroid-modified fungal infections should prompt evaluation for underlying immunosuppression, most importantly HIV infection. HIV is commonly associated with recalcitrant or extensive tinea due to impaired cell-mediated immunity. Along with antifungal therapy, HIV screening is indicated.

Why the other options are incorrect:

- A. ANA assay - Used for connective tissue diseases (eg, SLE), not annular scaly plaques.
- B. Hepatitis B serology - Not associated with dermatophytosis.
- D. Rule out beta-blocker usage - Relevant for psoriasis exacerbation, not fungal infections.

QUESTION

A wool farmer presents with a hemorrhagic lesion on his left index finger for 3 days. What is the most likely diagnosis?



A Anthrax

B Erysipeloid

C Ecthyma contagiosum

CORRECT

D Ecthyma gangrenosum

RIGHT ANSWER

OK

C. Ecthyma contagiosum

WHY THIS IS RIGHT

A wool farmer with a hemorrhagic lesion on the finger strongly suggests ecthyma contagiosum (orf), a zoonotic parapoxvirus infection transmitted from sheep and goats through direct contact with wool or skin lesions. It presents as a solitary hemorrhagic papule or nodule on the hands or fingers that may ulcerate. The condition is self-limiting and patients are otherwise systemically well.

Why the other options are incorrect:

- A. Anthrax - Causes a painless black eschar with marked edema, not just a hemorrhagic lesion.
- B. Erysipeloid - Due to *Erysipelothrix rhusiopathiae*; causes violaceous cellulitis, usually painful, not hemorrhagic.
- D. Ecthyma gangrenosum - Seen in immunocompromised patients with *Pseudomonas* septicemia; severe and systemic.

QUESTION

A 46-year-old male patient from Bihar comes with complaints of hypopigmented macules with normal sensation over the trunk and face. The patient gives a history of prolonged fever 3 years back for which he was treated. What is the drug of choice for this condition?



A Rifampicin + Clofazimine + Dapsone

B Amphotericin B

C Sodium stibogluconate

D Miltefosine

CORRECT

RIGHT ANSWER

OK

D. Miltefosine

WHY THIS IS RIGHT

This patient most likely has post-kala-azar dermal leishmaniasis (PKDL). Key clues are origin from Bihar (endemic area), history of prolonged fever years ago consistent with visceral leishmaniasis, and current hypopigmented macules with normal sensation. PKDL occurs months to years after apparent cure of kala-azar and serves as a reservoir for *Leishmania donovani*. Miltefosine is the drug of choice for PKDL in India due to good oral efficacy.

Why the other options are incorrect:

- A. Rifampicin + Clofazimine + Dapsone - Standard MDT for leprosy, which typically has sensory loss.
- B. Amphotericin B - Used for active visceral leishmaniasis, not PKDL first line.
- C. Sodium stibogluconate - Older therapy with resistance and toxicity; not preferred now.

QUESTION

A young boy presented the following appearance. Which of the following is not a characteristic of this organism causing the disease?



A The colony retains a white surface on 1% peptone agar medium

B Clustered round microconidia on bright field microscopy

C The urease test is negative

CORRECT

D It can penetrate the hair shaft of the human hair in vitro

RIGHT ANSWER

OK

C. The urease test is negative

WHY THIS IS RIGHT

The clinical picture (tinea in a young boy) is most consistent with *Trichophyton mentagrophytes*, a common dermatophyte. *T. mentagrophytes* is urease POSITIVE, which helps differentiate it from **Trichophyton rubrum** (urease negative). Therefore, stating that the urease test is negative is not a characteristic of this organism.

Why the other options are correct (characteristic):

- A. White colony on 1% peptone agar - **T. mentagrophytes** typically forms white, powdery colonies.
- B. Clustered round microconidia - A classic microscopic feature of **T. mentagrophytes**.
- D. Penetrates human hair shaft in vitro - Seen with **T. mentagrophytes** (positive hair perforation test).

QUESTION

A 3-year-old girl is brought to the OPD due to 2 days of fever and rash. Her mother says that she has also been refusing to eat or drink. She has no prior medical conditions and is up to date with recommended vaccinations. Physical examination shows multiple small vesicles and ulcers with an erythematous base on the buccal mucosa and tongue. There are similar vesicular lesions on the distal extremities. Which of the following is the most likely underlying cause of this patient's rash?

A Autoantibody-mediated acantholysis

B Disseminated enteroviral infection

CORRECT

C Idiosyncratic hypersensitivity reaction

D Immune response to a bacterial toxin

RIGHT ANSWER

OK

B. Disseminated enteroviral infection

WHY THIS IS RIGHT

This child's presentation is classic for hand-foot-and-mouth disease (HFMD). Key features include fever, painful oral vesicles and ulcers (buccal mucosa, tongue), and vesicular lesions on distal extremities. HFMD is caused by enteroviruses, most commonly Coxsackievirus A16 or Enterovirus 71, which disseminate after initial replication in the oropharynx and GI tract. Painful oral lesions explain refusal to eat or drink. The disease is self-limited and common in young children.

Why the other options are incorrect:

- Autoantibody-mediated acantholysis - Seen in pemphigus vulgaris, not febrile viral illness in children.
- Idiosyncratic hypersensitivity reaction - Typically drug-related; lacks characteristic hand-foot-mouth distribution.
- Immune response to a bacterial toxin - Seen in scarlet fever or toxic shock, which do not cause vesicular oral lesions.

QUESTION

A 44-year-old man comes to the OPD with a 4-day history of severe left-sided chest discomfort. The pain is constant and has a burning quality. Over the last day, the patient has developed a rash in the area of discomfort. He has not had similar symptoms before. Which of the following pathologic findings is most likely to be found in the affected area?



- A** Acantholysis and intercellular IgG deposits
- B** Eosinophilic cytoplasmic inclusions
- C** Koilocytosis of the superficial epidermal layers
- D** Multinucleated cells with intranuclear inclusions

CORRECT

RIGHT ANSWER

- OK** **D. Multinucleated cells with intranuclear inclusions**

WHY THIS IS RIGHT

This patient's severe unilateral burning pain followed by a dermatomal rash is classic for herpes zoster (shingles) due to reactivation of varicella-zoster virus (VZV) from dorsal root ganglia. Histopathology of affected skin shows multinucleated giant cells with eosinophilic intranuclear inclusions (Cowdry type A), reflecting herpesvirus-induced cytopathic effect. A Tzanck smear would demonstrate these multinucleated cells.

Why the other options are incorrect:

- A. Acantholysis with intercellular IgG - Seen in pemphigus vulgaris, not vesicular dermatomal rash.
- B. Eosinophilic cytoplasmic inclusions - Typical of poxvirus (molluscum contagiosum).
- C. Koilocytosis - Characteristic of HPV infection, causing warts, not shingles.

QUESTION

What is the probable diagnosis for a 38-year-old female who is experiencing substantial hair loss for 4 months and has a history of COVID-19 infection 8 months ago?



A Telogen effluvium

CORRECT

B Androgenetic alopecia

C Alopecia areata

D Anagen effluvium

RIGHT ANSWER

OK

A. Telogen effluvium

WHY THIS IS RIGHT

Key clinical clues:

- Diffuse hair loss (not patchy)
- Duration ~4 months
- History of stressor (COVID-19 infection 8 months ago)

Pathophysiology:

- Hair prematurely shifts from anagen → telogen phase
- Triggered by physiological stress (e.g., infections like COVID)
- Hair shedding typically begins 2-3 months after the trigger, but can persist

| Condition | Key Features | Why NOT here |

| ----- | ----- | ----- |

| Androgenetic alopecia | Gradual, patterned thinning (fronto-parietal/crown) | Chronic, not acute post-stress |

| Alopecia areata | Well-defined patchy hair loss | Not diffuse |

| Anagen effluvium | Rapid hair loss (days-weeks), usually chemotherapy | No chemo history |

QUESTION

A 4-year-old boy presents with multiple patches of hair loss which was associated with itching and scaling. His 2-year-old sister also had similar complaints. What is the most likely diagnosis?



A Tinea capitis

CORRECT

B Alopecia areata

C Seborrheic dermatitis

D Pediculosis capitis

RIGHT ANSWER

OK A. Tinea capitis

WHY THIS IS RIGHT

Tinea capitis is a dermatophyte infection of the scalp seen commonly in children, presenting with patchy hair loss + scaling + itching and often family spread.

- o Patchy alopecia with scaling
- o Broken hairs ("black dots")
- o Pruritus
- o Contagious (siblings often affected)
- Causative organisms:
 - o Trichophyton and Microsporum species
- Diagnosis:
 - o KOH mount -> fungal hyphae
 - o Wood's lamp (some species fluoresce)
- Treatment:
 - o Oral antifungals (Griseofulvin / Terbinafine) -> topical alone is insufficient

Differentiation:

- Alopecia areata -> smooth, non-scaly patches, no itching
- Seborrheic dermatitis -> diffuse greasy scales, no patchy hair loss
- Pediculosis capitis -> lice/nits, itching without scaling alopecia

QUESTION

A 27-year-old male came with complaints of asymptomatic generalized papulosquamous rash on trunk, moist flat grey perianal lesions and hair loss as given below. What is the most likely causative organism?



A *Treponema pallidum*

CORRECT

B *Malassezia furfur*

C *Staphylococcus aureus*

D *Microsporum canis*

RIGHT ANSWER

OK

A. *Treponema pallidum*

WHY THIS IS RIGHT

Secondary syphilis presents with generalized papulosquamous rash, condyloma lata (moist, flat perianal lesions), and patchy “moth-eaten” alopecia.

- Causative organism: *Treponema pallidum*
- Key features:

- o Non-pruritic rash (often involves palms and soles)
- o Condyloma lata in moist areas (highly infectious)
- o Patchy hair loss (“moth-eaten alopecia”)

Diagnostic tests:

- Screening -> VDRL / RPR
- Confirmatory -> FTA-ABS

Why not others:

- *Malassezia furfur* -> pityriasis versicolor (hypopigmented scaly patches)
- *Staphylococcus aureus* -> impetigo, folliculitis
- *Microsporum canis* -> tinea capitis (scaly alopecia, not systemic rash)

QUESTION

Identify the cause(s) that result in non-scarring alopecia from the following options.

1. Alopecia areata
2. Telogen effluvium
3. Androgenic alopecia
4. Frontal fibrosing alopecia

A 3 and 4

B 1, 2, and 3

CORRECT

C 2, 3, and 4

D Only 4

RIGHT ANSWER

OK

B. 1, 2, and 3

WHY THIS IS RIGHT

Non-scarring (non-cicatricial) alopecia is characterized by reversible hair loss with preservation of hair follicles, allowing potential regrowth.

Conditions causing non-scarring alopecia:

- Alopecia areata -> autoimmune; patchy hair loss with exclamation mark hairs
- Telogen effluvium -> diffuse shedding due to stress/illness; hair cycle shift
- Androgenetic alopecia -> patterned hair loss due to androgen sensitivity

Scarring alopecia (contrast):

- Frontal fibrosing alopecia -> permanent follicular destruction and fibrosis

QUESTION

Which of the following correctly matches the hair cycle phase with its characteristic feature?

A Catagen - Accounts for 80-90% of scalp follicles at any given time

B Telogen - Active proliferation phase lasting several years

C Anagen - Presence of angulated roots and longest growth period

CORRECT

D Catagen - Resting phase lasting 3 months

RIGHT ANSWER

OK C. Anagen - Presence of angulated roots and longest growth period

WHY THIS IS RIGHT

The hair cycle has three main phases:

1. Anagen (growth phase) - Longest phase, lasting 2-6 years on the scalp. Hair actively grows from the bulb; angulated roots are often seen in plucked anagen hairs.
2. Catagen (involution phase) - Short transitional phase (~2-3 weeks), during which hair follicle regresses.
3. Telogen (resting phase) - Lasts ~3 months; hair is shed at the end of this phase.

QUESTION

A 33-year-old man comes to the physician for evaluation of progressive hair loss from his scalp. He first noticed receding of the hairline over the bitemporal regions of his scalp 5 years ago. Since then, his hair has gradually become thinner over the crown of his head. He is otherwise healthy and takes no medications. Examination shows diffuse, nonscarring hair loss over the scalp with a bitemporal pattern of recession. Administration of which of the following systemic drugs is most appropriate to treat this patient's hair loss?

- A** Flutamide
- B** Clomipramine
- C** Minoxidil

D Finasteride

CORRECT

RIGHT ANSWER

OK D. Finasteride

WHY THIS IS RIGHT

This patient has androgenetic alopecia, characterized by bitemporal recession and vertex thinning in a young man. The most appropriate systemic therapy is finasteride, a 5- α reductase inhibitor that blocks conversion of testosterone to dihydrotestosterone (DHT), the androgen responsible for follicular miniaturization. By lowering scalp DHT levels, finasteride slows hair loss and promotes regrowth, especially at the crown, making it the treatment of choice for male-pattern baldness.

Why the other options are incorrect:

- A. Flutamide - An antiandrogen used in prostate cancer; not used due to toxicity.
- B. Clomipramine - A tricyclic antidepressant; no role in alopecia.
- C. Minoxidil - Effective but primarily topical; systemic use is not standard for alopecia.

QUESTION

A 28-year-old man comes to the OPD to discuss hair loss. He has hair loss primarily around the temples, which began insidiously 3 years ago. Physical examination shows moderate thinning of hair at the anterior scalp, temporal region, and vertex. An oral medication is prescribed to treat the hair loss. After the initiation of therapy, which of the following changes would most likely occur in this patient?

- A** Testosterone low, Dihydrotestosterone low, Estradiol normal
- B** Testosterone high, Dihydrotestosterone low, Estradiol high CORRECT
- C** Testosterone high, Dihydrotestosterone low, Estradiol low
- D** Testosterone high, Dihydrotestosterone high, Estradiol high

RIGHT ANSWER

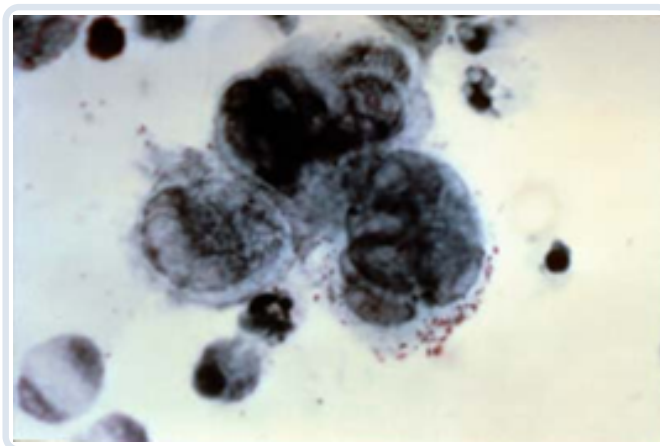
- OK** **B. Testosterone high, Dihydrotestosterone low, Estradiol high**

WHY THIS IS RIGHT

This is androgenetic alopecia (bitemporal recession + vertex thinning). The oral drug used is finasteride, a 5- α reductase inhibitor (type II), which blocks conversion of testosterone $\rightarrow$ dihydrotestosterone (DHT). So DHT falls. Because less testosterone is converted to DHT, testosterone rises slightly, and some of that extra testosterone is aromatized to estradiol, so estradiol can increase (explains gynecomastia/sexual side effects in some).

QUESTION

A 28-year-old dentist presents with painful grouped vesicular lesions on the distal phalanx of her right index finger. She reports a burning sensation followed by the appearance of fluid-filled blisters that ruptured into shallow ulcers. She denies systemic symptoms. A Tzanck smear from the lesion reveals the following. Which of the following is the most likely causative agent?



A Cocksackievirus A16

B Herpes simplex virus

CORRECT

C Human papillomavirus

D Varicella-zoster virus

RIGHT ANSWER

OK B. Herpes simplex virus

WHY THIS IS RIGHT

Painful grouped vesicles on finger with multinucleated giant cells = Herpetic whitlow caused by Herpes simplex virus (HSV).

- o Healthcare workers (dentists, doctors)
- o Exposure to oral secretions -> HSV-1 commonly
- Clinical features:

- o Painful grouped vesicles on erythematous base
- o Burning/tingling before eruption
- o Vesicles -> rupture -> shallow ulcers
- Diagnostic clue: Tzanck smear -> multinucleated giant cells
- Why not others:

- o Cocksackie A16 -> hand-foot-mouth disease (oral + palm/sole lesions)
- o HPV -> warts (non-vesicular)
- o VZV -> dermatomal vesicles, more systemic

QUESTION

A young woman presents with complaints of a painless ulcer in the genital area. It is associated with non-tender inguinal lymphadenopathy. What is the most likely diagnosis?

A Chancroid

B Syphilis

CORRECT

C Herpes genitalis

D Granuloma inguinale

RIGHT ANSWER

OK B. Syphilis

WHY THIS IS RIGHT

Painless genital ulcer with non-tender lymphadenopathy is classical for primary syphilis.

- Causative organism: *Treponema pallidum*
- Lesion: Chancre

- o Painless, indurated ulcer
- o Clean base with raised margins
- Lymph nodes:

Non-tender, firm, rubbery inguinal lymphadenopathy
Differentiation from other genital ulcers:

- Chancroid (*Haemophilus ducreyi*):

- o Painful ulcer
- o Tender, suppurative nodes (bubo)
- Herpes genitalis (HSV):

- o Multiple painful vesicles/ulcers
- o Burning sensation
- Granuloma inguinale (Donovanosis):

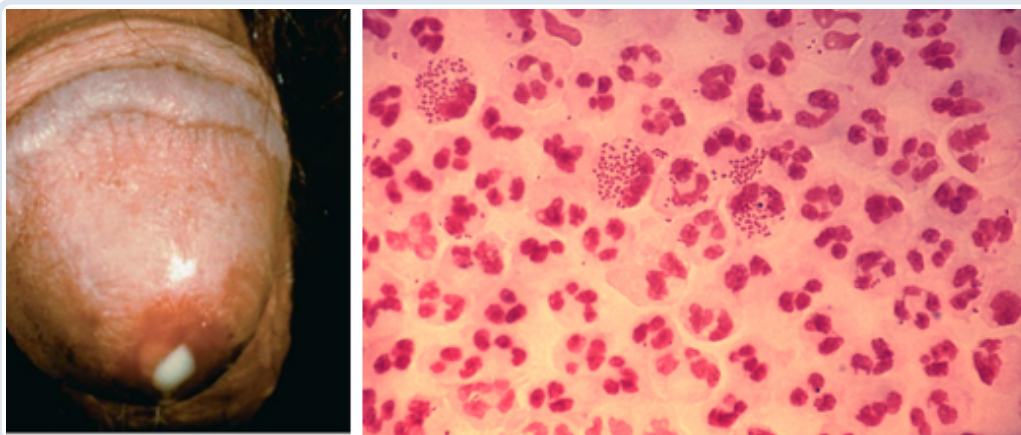
- o Painless ulcer but beefy red, bleeds easily
- o No lymphadenopathy (pseudo-bubo)

APPROACH TO GENITAL ULCERS

Painful	Painless
  HSV • Erosions • Erythematous base • Multinucleate giant cell • Acantholysis • IP: 2-5 days	  Syphilis • <i>T. pallidum</i> • LN - Painless (B/L) • Shotty • IP: 9-90 days
  Chancroid • <i>H. ducreyi</i> • LN- Painful (bubo) • IP: 2-5 days	  Donovanosis (<i>Granuloma Inguinale</i>) • <i>Klebsiella donovansii</i> • Red, Beefy ulcer • Pseudo-Bubo • IP: 8-80 days
	  LEV • <i>C. trachomatis</i> (L2 is mc) • Transient ulcer Frie test • <i>Mycoplasma genitalium</i> • Genital elephantiasis (Etiomene, Saxophone) • IP: 3-30 days

QUESTION

A male patient with a history of unprotected sexual intercourse four days back came with complaints of painful urethral discharge. What is the treatment of choice?



A Doxycycline 100 mg BD x 2 weeks

B Cefixime 800 mg stat

CORRECT

C Benzathine Penicillin

D Azithromycin 1 gm stat

RIGHT ANSWER

OK

B. Cefixime 800 mg stat

WHY THIS IS RIGHT

Painful purulent urethral discharge after unprotected sex with smear showing intracellular gram-negative diplococci indicates gonorrhea (*Neisseria gonorrhoeae*).

- Key diagnostic clue: GN diplococci inside neutrophils
- Clinical features: Dysuria + thick purulent discharge

Treatment of choice (uncomplicated gonorrhea):

- Oral Cefixime (single dose) (alternative to IM ceftriaxone when not feasible)

Important addition: Always cover Chlamydia -> add Azithromycin or Doxycycline

Why not others:

- Doxycycline alone -> Chlamydia, not gonorrhea
- Benzathine penicillin -> Syphilis
- Azithromycin alone -> not sufficient due to resistance

QUESTION

| Nugent score is for diagnosis of?

A Bacterial vaginosis

CORRECT

B Trichomoniasis**C** Candidiasis**D** Chlamydia

RIGHT ANSWER

OK

A. Bacterial vaginosis

WHY THIS IS RIGHT

Nugent score is a Gram stain-based scoring system used to diagnose bacterial vaginosis (BV).

- Principle: Evaluates vaginal flora by quantifying:

- o Lactobacilli (↓ in BV)
- o Gardnerella/Bacteroides (↑)
- o Mobiluncus (↑)
- Scoring (0-10):

- o 0-3: Normal flora
- o 4-6: Intermediate
- o 7-10: Bacterial vaginosis
- Clinical relevance:

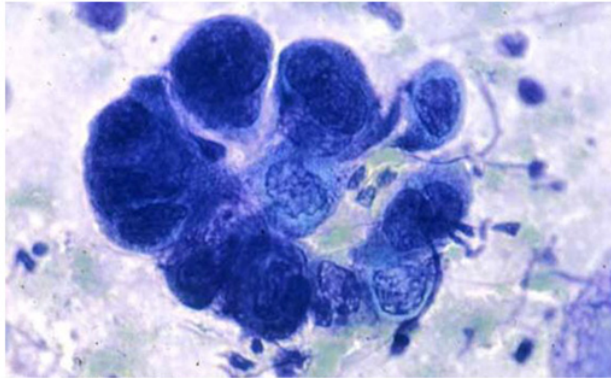
- o Objective alternative to Amsel criteria
- o Helps confirm polymicrobial dysbiosis

Why not others:

- Trichomoniasis -> wet mount (motile trophozoites)
- Candidiasis -> KOH mount (budding yeast, pseudohyphae)
- Chlamydia -> NAAT (PCR-based)

QUESTION

A 7-year-old boy is brought to the emergency department with multiple fluid-filled lesions around his lips that ruptured to form painful erosions. The child had a low-grade fever a day before the onset of skin findings. Examination reveals vesiculoulcerative lesions on the perioral skin and mucosa. A Tzanck smear prepared from the base of a is shown below. Which of the following is the most likely causative agent?



- A** Cytomegalovirus (CMV)
- B** Varicella zoster virus (VZV)
- C** Herpes simplex virus (HSV) CORRECT
- D** Human papillomavirus (HPV)

RIGHT ANSWER

- OK** **C. Herpes simplex virus (HSV)**

WHY THIS IS RIGHT

A child with painful perioral vesicles -> rupture -> erosions, preceded by fever, and Tzanck smear showing multinucleated giant cells with intranuclear inclusions is typical of Herpes simplex virus (HSV-1) infection (primary herpetic gingivostomatitis).

- Causative agent: HSV-1 (common in children; HSV-2 more genital)
- Lesion evolution: Vesicles -> rupture -> painful ulcers/erosions
- Lab clue:

- o Tzanck smear: multinucleated giant cells
- o Intranuclear inclusions (Cowdry type A)

Why not others:

- CMV -> "owl's eye" inclusions, systemic disease in immunocompromised
- VZV -> dermatomal (zoster) or generalized (chickenpox), not localized perioral clusters
- HPV -> warts, no vesicles or Tzanck findings

QUESTION

A patient came to OPD with complaints of pain in his genital area. On examination, there were painful coalescing vesicles, associated with painful inguinal lymphadenopathy. What is the diagnosis?

A Herpes Simplex Virus-2 (HSV-2)

CORRECT

B Molluscum contagiosum

C Human papillomavirus

D Varicella zoster virus

RIGHT ANSWER

OK

A. Herpes Simplex Virus-2 (HSV-2)

WHY THIS IS RIGHT

Painful, coalescing genital vesicles with tender inguinal lymphadenopathy are classic for genital herpes.

- Etiology: Herpes Simplex Virus type 2 (HSV-2) (most common)
- Lesion morphology:

- o Multiple painful vesicles -> rupture -> shallow ulcers
- o Often coalesce
- Associated feature: Tender inguinal lymphadenopathy

Key differentiations:

- Molluscum contagiosum -> painless, umbilicated papules
- HPV (genital warts) -> painless, cauliflower-like growths
- Varicella-zoster virus -> dermatomal distribution, not typically genital clustered vesicles

QUESTION

Mother had painful vesicular lesions over genitalia one year back. Baby is born with features of meningitis and fever and rashes in abdomen and forearm and died within a week. Scrapings from lesions showed multinucleate giant cells. What is the most likely organism?

A Herpes Simplex Virus type 2 (HSV2)

CORRECT

B Enterovirus 70

C Human Papillomavirus (HPV)

D Varicella-Zoster Virus

RIGHT ANSWER

OK

A. Herpes Simplex Virus type 2 (HSV2)

WHY THIS IS RIGHT

Neonatal infection with fever, meningitis, and vesicular skin lesions, along with Tzanck smear showing multinucleated giant cells, is characteristic of neonatal herpes.

- Causative organism: Herpes Simplex Virus type 2 (HSV-2)
- Source: Vertical transmission during vaginal delivery from a mother with genital herpes
- Clinical forms of neonatal HSV:

- o Skin, eye, mouth disease (SEM)
- o CNS disease (meningitis/encephalitis)
- o Disseminated disease (multi-organ, high mortality)
- Key diagnostic clue: Multinucleated giant cells on Tzanck smear

Why not others:

- Enterovirus 70 -> acute hemorrhagic conjunctivitis
- HPV -> warts, no neonatal CNS disease
- Varicella-zoster -> different presentation (no classic multinucleated giant cells in this context)

QUESTION

| Drug resistance is most seen with which STI?

A Chancroid

B Donovanosis

C Syphilis

D **Gonorrhoea**

CORRECT

RIGHT ANSWER

OK

D. Gonorrhoea

WHY THIS IS RIGHT

Gonorrhoea (*Neisseria gonorrhoeae*) is the STI most notorious for rapidly developing antimicrobial resistance.

- Mechanisms of resistance:

- o β -lactamase production (penicillin resistance)

- o Altered penicillin-binding proteins

- o Efflux pumps & porin mutations

- Drugs with rising resistance: Penicillin, tetracyclines, fluoroquinolones, even some cephalosporins

- Current treatment:

- o Ceftriaxone (last reliable first-line in many settings)

- o Often combined with anti-chlamydial therapy

Why not others:

- Syphilis (*Treponema pallidum*) -> still highly sensitive to penicillin

- Chancroid (*H. ducreyi*) -> some resistance but not as notorious

- Donovanosis -> relatively predictable response to antibiotics

QUESTION

A 23-year-old woman presents with malodorous discharge and positive whiff test. Which of the following is likely cause?

A Candidiasis

B Bacterial vaginosis

CORRECT

C Trichomoniasis

D Neisseria

RIGHT ANSWER

OK B. Bacterial vaginosis

WHY THIS IS RIGHT

Malodorous vaginal discharge with a positive whiff test (fishy odor on adding KOH) is characteristic of bacterial vaginosis (BV).

- Cause: Polymicrobial overgrowth, most commonly *Gardnerella vaginalis*
- Key diagnostic features (Amsel criteria):
- Thin, homogeneous discharge
- Positive whiff test (amine odor with KOH)
- Clue cells on microscopy
- Vaginal pH > 4.5

Why not others:

- Candidiasis -> thick curdy discharge, no fishy odor, pH normal
- Trichomoniasis -> frothy discharge, strawberry cervix, motile organisms
- Neisseria -> purulent discharge, no whiff test positivity

QUESTION

in males, urethritis is caused by all except:

- A Neisseria
- B Mycoplasma
- C Trichomonas

D **Gardnerella**

CORRECT

RIGHT ANSWER

OK **D. Gardnerella**

WHY THIS IS RIGHT

Gardnerella vaginalis is not a causative organism of male urethritis.

	Gonococcal urethritis	Non gonococcal urethritis
Etiology:	Neisseria gonorrhea	Chlamydia trachomatis (D-K) Ureaplasma urealyticum Mycoplasma genitalium Trichomonas vaginalis (Q)
Incubation period:	2-5 days	7-14 days

QUESTION

A 28-year-old man came with complaints of pigmented lesions on palms and soles. He gave the history of sexual encounter followed by the development of transient genital lesion, 4 weeks ago. Which of the following investigation is most appropriate for this patient?



A KOH mount

B Tzanck smear

C Skin biopsy

D Serology

CORRECT

RIGHT ANSWER

OK D. Serology

WHY THIS IS RIGHT

Palmar and plantar pigmented maculopapular rash with history of a painless genital ulcer (chancre) indicates secondary syphilis caused by *Treponema pallidum*.

- Stage: Secondary syphilis (hematogenous spread)
- Key feature: Rash involving palms and soles
- Most appropriate investigation: Serology

- o Screening: VDRL / RPR
- o Confirmatory: FTA-ABS

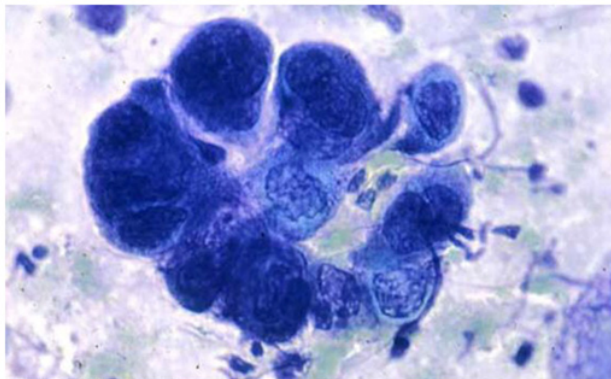
Why not other options:

- KOH mount -> Fungal infection
- Tzanck smear -> Herpes
- Skin biopsy -> Not first-line

Stage	Preferred Investigation	Rationale
Primary	Dark-field microscopy	Direct visualization of spirochetes
Secondary	Serology (VDRL/RPR)	High antibody <u>titers</u> , systemic infection
Tertiary	Serology + CSF analysis	Neurological involvement assessment

QUESTION

A young male presented with painful vesicular lesions over the genitalia with superficial erosion. Tzanck smear findings are as shown in the image. Which of the following is the drug of choice for this condition?



A Acyclovir

CORRECT

B Ceftriaxone

C Penicillin

D Prednisolone

RIGHT ANSWER

OK A. Acyclovir

WHY THIS IS RIGHT

Painful vesicular genital lesions with superficial erosions and a Tzanck smear showing multinucleated giant cells are characteristic of genital herpes (HSV infection).

- Etiology: Herpes simplex virus (usually HSV-2, sometimes HSV-1)
- Tzanck smear finding: Multinucleated giant cells with intranuclear inclusions
- Drug of choice: Acyclovir (inhibits viral DNA polymerase)

Key differentiation:

- Ceftriaxone -> Gonorrhea
- Penicillin -> Syphilis
- Prednisolone -> Not indicated (may worsen infection)

QUESTION

| On PS examination, this finding is seen. What is the diagnosis?



A Bacterial Vaginosis

B Trichomoniasis

CORRECT

C Candidiasis

D Cervical Carcinoma

RIGHT ANSWER

OK B. Trichomoniasis

WHY THIS IS RIGHT

Trichomoniasis (caused by *Trichomonas vaginalis*) presents with a characteristic “strawberry cervix” (punctate hemorrhages on cervix).

- Strawberry cervix on per speculum exam
- Frothy, greenish vaginal discharge
- Vaginal itching, irritation
- Pathophysiology: Protozoan infection -> inflammation -> punctate hemorrhages
- Diagnosis: Wet mount showing motile flagellated organisms
- Treatment: Metronidazole (treat both partners)

Why not other options:

A. Bacterial vaginosis

- Thin, fishy smelling discharge
- No cervical inflammation or strawberry appearance
- C. Candidiasis
- Curdy white discharge, intense itching
- No punctate hemorrhages

D. Cervical carcinoma

- Irregular, friable growth
- Not a diffuse strawberry pattern

QUESTION

Which of the following is not a syndrome management in males?

A Urethral discharge

B Genital discharge

C Inguinal swelling

D Lower abdominal pain

CORRECT

RIGHT ANSWER

OK

D. Lower abdominal pain

WHY THIS IS RIGHT

Syndromic management of STIs is gender-specific. In males, the standard syndromes include:

- Urethral discharge
- Genital ulcer disease
- Inguinal bubo (swelling)

Lower abdominal pain is a syndrome of females, representing pelvic inflammatory disease (PID).



QUESTION

22-year-old primigravid woman at 8 weeks gestation comes to the office for her initial prenatal visit. She has no symptoms except mild nausea. She smoked a pack of cigarettes a day and drank 7-8 beers each week but quit after learning she was pregnant. The patient has a history of an allergic reaction to penicillin; she developed a generalized rash with intense itching that responded to antihistamines and corticosteroid cream. Vital signs are within normal limits. Physical examination shows no abnormalities. The screening VDRL test is positive, fluorescent treponemal antibody absorption test is positive. Her HIV test is negative. Which of the following is the best next step in management of this patient?

- A** Azithromycin
- B** Doxycycline
- C** No treatment until delivery
- D** Skin testing and penicillin desensitization

CORRECT

RIGHT ANSWER

- OK** **D. Skin testing and penicillin desensitization**

WHY THIS IS RIGHT

This patient has serologically confirmed syphilis in early pregnancy (positive VDRL + FTA-ABS) and a history of penicillin allergy (mild rash).

Key points:

- Penicillin is the only proven effective treatment for syphilis in pregnancy and prevents congenital syphilis.
- Azithromycin and doxycycline are contraindicated in pregnancy or unreliable against maternal and fetal infection.
- Delaying treatment until delivery risks vertical transmission.
- The recommended approach is penicillin skin testing and desensitization, followed by appropriate penicillin therapy.

Why the other options are incorrect:

- A. Azithromycin - Not reliably effective for preventing congenital syphilis.
- B. Doxycycline - Contraindicated in pregnancy (teratogenic).
- C. No treatment until delivery - Risks fetal infection, congenital syphilis, and adverse outcomes.

QUESTION

I All are true regarding Jarisch-Herxheimer reaction, except:

- A** Occurs within 24 hours of penicillin therapy in syphilis
- B** Due to lipoprotein release causing cytokine storm
- C** Corticosteroids are indicated in pregnant women and neurosyphilis
- D** It is a contraindication to penicillin therapy

CORRECT

RIGHT ANSWER

OK

D. It is a contraindication to penicillin therapy

WHY THIS IS RIGHT

The Jarisch-Herxheimer reaction (JHR) is an acute, transient reaction that occurs after antibiotic treatment of spirochetal infections, most commonly syphilis. Key points:

- Timing: Usually occurs within 24 hours of initiating therapy (A).
- Pathophysiology: Release of treponemal lipoproteins triggers a cytokine-mediated inflammatory response (B).
- Management: Supportive care is usually sufficient; corticosteroids may be used in pregnant women to reduce fetal risk and in severe cases like neurosyphilis (C).
- Penicillin is not contraindicated; in fact, it remains the drug of choice, despite the possibility of JHR (D is false).

QUESTION

| Which of the following is not included in the Amsel criteria?

A Vaginal pH <4.5

CORRECT

B Positive whiff test

C White, homogeneous vaginal discharge

D Clue cells

RIGHT ANSWER

OK

A. Vaginal pH <4.5

WHY THIS IS RIGHT

The Amsel criteria are used to diagnose bacterial vaginosis (BV). A diagnosis is made when ≥ 3 of the following 4 criteria are present:

1. Homogeneous, thin, white or gray vaginal discharge -> C
2. Presence of clue cells on wet mount -> D
3. Vaginal pH >4.5 -> opposite of option A
4. Positive "whiff" test (fishy odor with addition of KOH) -> B

QUESTION

A 25-year-old male presents to the clinic with complaints of dysuria and urethral discharge. Upon further questioning, he reports recent unprotected sexual intercourse. A urethral swab is taken for Gram stain and culture. Which of the following organisms is least likely to cause urethritis in this patient?

A Chlamydia trachomatis

B Haemophilus ducreyi

CORRECT

C Neisseria gonorrhoeae

D Trichomonas

RIGHT ANSWER

OK

B. Haemophilus ducreyi

WHY THIS IS RIGHT

This patient has urethritis following unprotected sex. The most common causes of urethritis are *Neisseria gonorrhoeae* (gonococcal urethritis) and *Chlamydia trachomatis* (most common cause of nongonococcal urethritis). *Trichomonas vaginalis* can also cause urethritis, especially persistent or recurrent cases. *Haemophilus ducreyi*, however, causes chancroid, which presents with painful genital ulcers and tender suppurative inguinal lymphadenopathy, not urethritis.

Why the other options are incorrect:

- A. *Chlamydia trachomatis* - Leading cause of nongonococcal urethritis.
- C. *Neisseria gonorrhoeae* - Classic cause of acute purulent urethritis.
- D. *Trichomonas* - Can cause urethritis, particularly in sexually active men.

QUESTION

Partner treatment of STD is given to all while prescribing all of the following kits, except:

A Blue kit

B Red kit

CORRECT

C White kit

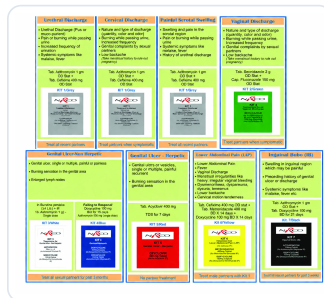
D Black kit

RIGHT ANSWER

OK B. Red kit

WHY THIS IS RIGHT

Under NACO syndromic management guidelines, partner treatment is advised for almost all sexually transmitted infections to prevent reinfection-except when prescribing the Red kit.



QUESTION

Identify the correct kit for the clinical presentations:

1. Painful ulcers upon palpation, with suppurative inguinal lymphadenopathy on the right side
2. Vaginal discharge in a CSW with cervical erosions
3. Painful, swollen, and tender inguinal lymph node in a truck driver
4. Painless ulcer in the genital area with non-tender inguinal lymphadenopathy in CSW; past h/o treatment of a similar lesion resulted in fever, malaise, tachycardia and vomiting

A 1-Red, 2-Green, 3-Black, 4-Blue

B 1-White, 2-Green, 3-Black, 4-Blue

C 1-White, 2-Grey, 3-Black, 4-White

CORRECT

D 1-Blue, 2-Grey, 3-White, 4-Blue

RIGHT ANSWER

OK C. 1-White, 2-Grey, 3-Black, 4-White

WHY THIS IS RIGHT

1. Painful genital ulcers with suppurative inguinal lymphadenopathy -> suggests chancroid -> treated with Kit White.
2. Vaginal discharge in a CSW with cervical erosions -> indicates cervicitis (GC + Chlamydia) -> managed with Kit Grey
3. Painful, swollen, tender inguinal lymph node (bubo) in a truck driver -> typical of LGV -> treated with Kit Black.
4. Painless genital ulcer with non-tender lymphadenopathy and Jarisch- Herxheimer reaction history -> classic primary syphilis -> treated with Kit White (Not suggestive of allergy or a CI for future penicillin use)

QUESTION

A 20-year-old woman comes to the OPD due to 3 days of malodorous vaginal discharge and severe vulvar pruritus. The patient is sexually active and had a copper-containing intrauterine device placed for contraception last year. Pelvic examination shows a thin, frothy, and green vaginal discharge with marked vulvar and vaginal erythema. Vaginal discharge pH is 5.5. The intrauterine device strings are visualized and protrude through the cervical os. Microscopic examination of this patient's vaginal discharge will most likely reveal which of the following?

- A** Clue cells
- B** Filamentous, gram-positive bacilli
- C** Flagellated, motile organisms
- D** Pseudo hyphae

CORRECT

RIGHT ANSWER

- OK** **C. Flagellated, motile organisms**

WHY THIS IS RIGHT

This patient has trichomoniasis, caused by *Trichomonas vaginalis*. Classic features include thin, frothy, green discharge, malodor, severe vulvar pruritus, erythema, and elevated vaginal pH (>4.5). On wet mount microscopy, the hallmark finding is flagellated, motile protozoa with jerky movements. Copper IUD use does not cause this but does not protect against STIs.

Why other options are incorrect:

- A. Clue cells - Seen in bacterial vaginosis; discharge is thin and gray with fishy odor but minimal inflammation.
- B. Filamentous, gram-positive bacilli - Indicates *Lactobacillus*, normal vaginal flora, associated with acidic pH.
- D. Pseudohyphae - Seen in *Candida* infection; discharge is thick, curdy, white, and pH is normal

QUESTION

Identify the condition shown in the image and select the most appropriate treatment.



CORRECT

A Staphylococcal scalded syndrome-injection cephalalexin

B Epidermolysis bullosa- bandaging

C Bullous impetigo-antibiotics

D Erythema multiforme-antivirals

RIGHT ANSWER

OK

A. Staphylococcal scalded syndrome-injection cephalalexin

WHY THIS IS RIGHT

Staphylococcal Scalded Skin Syndrome (SSSS) is a toxin-mediated condition caused by *Staphylococcus aureus*, characterized by widespread superficial blistering and skin peeling in neonates/infants.

- o Exfoliative toxins (A & B) -> cleavage at stratum granulosum (desmoglein-1)

- o Leads to superficial epidermal splitting

- Clinical features:

- o Diffuse erythema -> flaccid bullae -> skin desquamation (scalded appearance)

- o Positive Nikolsky sign

- o Perioral crusting, irritability

- o No mucosal involvement (unlike SJS/TEN)

- Treatment:

- o IV anti-staphylococcal antibiotics (e.g., cephalosporins like cephalalexin/cefazolin)

- o Supportive care (fluids, skin care)

Why not others:

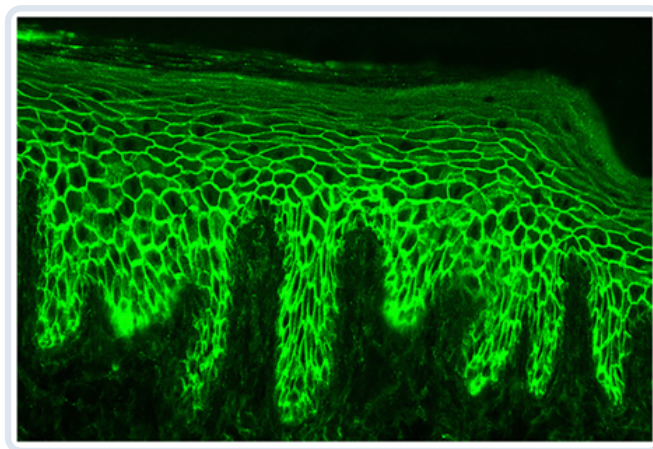
- o Epidermolysis bullosa -> genetic, chronic condition

- o Bullous impetigo -> localized lesions

- o Erythema multiforme -> target lesions, mucosal involvement

QUESTION

A patient came with complaints of vesicular oral lesions, and on skin sample, DIF as given below. What is the most likely diagnosis?



A Pemphigus vulgaris

CORRECT

B Bullous pemphigoid

C LIGA

D Dermatitis herpetiformis

RIGHT ANSWER

OK

A. Pemphigus vulgaris

WHY THIS IS RIGHT

Pemphigus vulgaris is characterized by painful mucosal (oral) vesicles/erosions with intraepidermal blistering and a classic "fishnet (chicken wire)" pattern on direct immunofluorescence (DIF).

- Pathophysiology:

- o Autoantibodies (IgG) against desmoglein 3 ($\pm$ desmoglein 1)

- o Causes loss of cell adhesion (acantholysis)

- DIF finding (hallmark):

- o Intercellular IgG deposition -> fishnet/chicken wire pattern

- Clinical features:

- o Oral lesions precede skin lesions

- o Flaccid bullae -> rupture -> painful erosions

- o Positive Nikolsky sign

Differentiation:

- Bullous pemphigoid -> subepidermal, linear IgG at BMZ

- Dermatitis herpetiformis -> granular IgA at dermal papillae

- Linear IgA disease -> linear IgA deposition

QUESTION

A young male came with GI complaints like malabsorption, diarrhea. Cutaneous examination noted itchy lesions on the skin with blistering. On histopathology, cryptitis and flattened villi were noted. His condition improved with a gluten-free diet. What is the specific antibody in this condition? (NEET PG 2024)

A Tissue Transglutaminase 3 (ttg-3)

CORRECT

B Anti-nuclear antibodies

C Rheumatoid factor

D P-ANCA

RIGHT ANSWER

OK

A. Tissue Transglutaminase 3 (ttg-3)

WHY THIS IS RIGHT

A patient with malabsorption, diarrhea, and itchy blistering skin lesions that improve with a gluten-free diet has dermatitis herpetiformis associated with celiac disease.

- Skin disease: Dermatitis herpetiformis
- Gut pathology: Villous atrophy + crypt hyperplasia (celiac disease)
- Key antibody in skin: IgA against tissue transglutaminase-3 (tTG-3)

Pathophysiology:

- Gluten -> immune response -> IgA antibodies
- These deposit in dermal papillae -> cause pruritic vesicles

Related antibodies:

- tTG-2 (tissue transglutaminase-2) -> intestinal celiac disease
- tTG-3 -> skin involvement (dermatitis herpetiformis)

QUESTION

A 34-year-old woman presents with an intensely pruritic papulovesicular rash on her elbows and buttocks. She was recently diagnosed with gluten-sensitive enteropathy (celiac disease). Examination reveals grouped erythematous papulovesicular lesions. A skin biopsy with direct immunofluorescence from perilesional skin shows granular IgA deposition at the dermal papillae. Which of the following is the most likely diagnosis?



A Pemphigus vulgaris

B Bullous pemphigoid

C Psoriasis

D Dermatitis herpetiformis

CORRECT

RIGHT ANSWER

OK

D. Dermatitis herpetiformis

WHY THIS IS RIGHT

Dermatitis herpetiformis is a chronic, intensely pruritic papulovesicular disorder strongly associated with celiac disease (gluten sensitivity).

• Clinical features:

- o Grouped vesicles ("herpetiform")
- o Severe itching
- o Symmetrical distribution on extensor surfaces (elbows, knees, buttocks)
- Pathology (hallmark):

o Granular IgA deposition at dermal papillae on direct immunofluorescence

• Pathogenesis:

o IgA antibodies against tissue transglutaminase cross-react with skin

• Management:

- o Gluten-free diet (definitive)
- o Dapsone for rapid symptom relief

Differentiation:

- Pemphigus vulgaris -> intraepidermal flaccid bullae, IgG
- Bullous pemphigoid -> subepidermal tense bullae, linear IgG
- Psoriasis -> plaques with silvery scales

QUESTION

| Which of the following is the most common cause of paraneoplastic pemphigus?

- A Multiple myeloma
- B Non-Hodgkin's lymphoma**
- C Gastric adenocarcinoma
- D Chronic lymphocytic leukemia

CORRECT

RIGHT ANSWER

- B. Non-Hodgkin's lymphoma**

WHY THIS IS RIGHT

Paraneoplastic pemphigus (PNP) is most commonly associated with non-Hodgkin's lymphoma, especially B-cell lymphomas. It is a severe autoimmune blistering disease caused by autoantibodies against desmogleins and plakin proteins, leading to painful mucosal erosions and polymorphic skin lesions. Among all associated malignancies, NHL is the most frequent, followed by CLL and Castleman disease.

Why others are less common:

- A. Multiple myeloma - Rare association
- C. Gastric adenocarcinoma - Solid tumors are uncommon causes
- D. CLL - Important association, but less common than NHL

QUESTION

A 6-year-old child presents with recurrent blisters on areas of minor trauma since infancy. The blisters heal with atrophic scarring and milia formation. Examination reveals nail dystrophy and mucosal involvement. Immunofluorescence mapping shows the level of cleavage at the sublamina densa of the basement membrane zone. Which protein defect explains this condition?

A Collagen IV

B Collagen VII

CORRECT

C Laminin-332

D Keratin 14

RIGHT ANSWER

OK B. Collagen VII

WHY THIS IS RIGHT

This child has dystrophic epidermolysis bullosa (DEB). Key clues are blistering since infancy after minor trauma, healing with atrophic scarring and milia, nail dystrophy, mucosal involvement, and cleavage below the basement membrane (sublamina densa) on immunofluorescence mapping. DEB is caused by defects in collagen VII, which forms anchoring fibrils that attach the basement membrane to the underlying dermis. Loss of these fibrils leads to deep blistering and scarring.

Why the other options are incorrect:

- A. Collagen IV - Component of the basement membrane, not anchoring fibrils.
- C. Laminin-332 - Defective in junctional epidermolysis bullosa (cleavage within lamina lucida).
- D. Keratin 14 - Defect causes epidermolysis bullosa simplex (intraepidermal, no scarring).

QUESTION

A 30-year-old individual presents with multiple blistering skin lesions. A skin biopsy reveals acantholysis, characterized by the loss of adhesion between keratinocytes. Which of the following conditions is least likely to display acantholytic cells on histological examination?

- A** Pemphigus
- B** Human papillomavirus (HPV) infection
- C** Herpes simplex infection
- D** Bullous impetigo

CORRECT

RIGHT ANSWER

- OK** **B. Human papillomavirus (HPV) infection**

WHY THIS IS RIGHT

Acantholysis refers to loss of intercellular adhesion between keratinocytes, typically due to damage to desmosomes. It is a key histologic feature in several blistering disorders-but not HPV infection.

HPV infection causes koilocytosis (perinuclear clearing, nuclear atypia), not acantholysis.

Why other options are correct:

- A. Pemphigus - Autoantibodies against desmogleins -> classic acantholysis ("row of tombstones").
- C. Herpes simplex infection - Shows acantholysis with multinucleated giant cells on Tzanck smear.
- D. Bullous impetigo - Caused by *Staphylococcus aureus* exfoliative toxins that cleave desmoglein-1, producing acantholysis.

QUESTION

A 47-year-old male presents with erythematous, shallow erosions accompanied by blisters and yellowish scales, localized to seborrheic regions such as the face, chest, and upper back. There is no involvement of the oral mucosa. A skin biopsy with immunopathology reveals IgG deposition on keratinocytes. What is the most likely diagnosis?



A Dermatitis herpetiformis

B Pemphigus foliaceus

CORRECT

C Bullous pemphigoid

D Staphylococcal scalded skin syndrome

RIGHT ANSWER

OK B. Pemphigus foliaceus

WHY THIS IS RIGHT

This presentation is classic for pemphigus foliaceus. Key features include superficial, flaccid blisters that rupture easily, leaving erythematous, shallow erosions with yellowish scales, predominantly over seborrheic areas (face, chest, upper back).

Importantly, there is no oral mucosal involvement, which helps distinguish it from pemphigus vulgaris. Immunopathology showing IgG deposition on keratinocytes reflects autoantibodies against desmoglein-1, a desmosomal protein located in the superficial epidermis.

Why the other options are incorrect:

- A. Dermatitis herpetiformis - Intensely pruritic, grouped vesicles on extensor surfaces; IgA (not IgG) deposition.
- C. Bullous pemphigoid - Tense bullae, subepidermal split, linear IgG at basement membrane.
- D. Staphylococcal scalded skin syndrome - Toxin-mediated, occurs mainly in infants; no IgG deposition

QUESTION

A 14-month-old girl is brought to the clinic by her parents due to sores on her feet. Since she took her first steps 3 months ago, she has had blisters involving the soles of the feet, which subsequently break down and heal slowly. The patient had failure to thrive as an infant due to frequent oral ulcerations but otherwise has been healthy and has achieved normal developmental milestones. Examination shows small bullae at the soles with faint erythema and no scarring. Biopsy taken at the margin of a blister shows an intraepidermal cleavage plane. Which of the following most likely contributes to the pathogenesis of this patient's condition?

A Autoantibodies against tissue transglutaminase

B Impaired keratin filament assembly

CORRECT

C Loss of function mutation in filaggrin

D T-cell-mediated hypersensitivity reaction

RIGHT ANSWER

OK B. Impaired keratin filament assembly

WHY THIS IS RIGHT

- This infant has epidermolysis bullosa simplex (EBS). Key clues are blistering with minor trauma (walking), oral ulcers in infancy, slow healing without scarring, and intraepidermal cleavage on biopsy.
- EBS is caused by mutations in keratin 5 or keratin 14, which are critical for keratin intermediate filament assembly in basal keratinocytes.
- Defective cytoskeletal support makes cells fragile, leading to blister formation with mechanical stress.

Why the other options are incorrect:

- A. Autoantibodies against tissue transglutaminase - Seen in celiac disease, not blistering disorders.
- C. Loss of function mutation in filaggrin - Causes atopic dermatitis/ichthyosis vulgaris, not bullae.
- D. T-cell-mediated hypersensitivity reaction - Seen in contact dermatitis, not congenital blistering.

QUESTION

A previously healthy 3-month-old girl is brought to the physician because of fever, irritability, and rash for 3 days. The rash started around the mouth before spreading to the trunk and extremities. Her temperature is 38.6°C (101.5°F). Examination shows a diffuse erythematous rash with flaccid bullae on the neck, flexural creases, and buttocks. Gentle pressure across the trunk with a gloved finger creates a blister. Oropharyngeal examination shows no abnormalities. Which of the following is the most likely underlying mechanism of these skin findings?

A Toxin-induced cleavage of desmoglein-1

CORRECT

B Bacterial production of erythrogenic toxin

C Bacterial invasion of the epidermis

D Autoantibody deposition in stratum spinosum

RIGHT ANSWER

OK

A. Toxin-induced cleavage of desmoglein-1

WHY THIS IS RIGHT

This infant has staphylococcal scalded skin syndrome (SSSS), suggested by fever, irritability, diffuse erythema, flaccid bullae, and a positive Nikolsky sign, with no mucosal involvement. SSSS is caused by exfoliative toxins (ETA, ETB) from *Staphylococcus aureus* that cleave desmoglein-1, a desmosomal protein in the superficial epidermis (stratum granulosum). Loss of cell adhesion leads to superficial blistering and skin desquamation.

Why the other options are incorrect:

- B. Bacterial production of erythrogenic toxin - Causes scarlet fever (sandpaper rash), not bullae or Nikolsky positivity.
- C. Bacterial invasion of the epidermis - Seen in bullous impetigo; lesions are localized and contain bacteria.
- D. Autoantibody deposition in stratum spinosum - Describes pemphigus vulgaris (anti-desmoglein-3) with mucosal involvement.

QUESTION

A 27-year-old woman comes to the emergency department with a 1-day history of skin rash. Two weeks ago, she had an episode of recurrent genital lesions, which began with small papules and subsequently became vesicular with ulceration, crusting, and eventual healing. On physical examination, she appears comfortable. Temperature is 37°C (98.6°F). Skin findings are shown in the image below. Which of the following is the most likely diagnosis?



A Disseminated herpes simplex infection

B Erythema multiforme

CORRECT

C Primary HIV infection

D Stevens-Johnson syndrome

RIGHT ANSWER

OK

B. Erythema multiforme

WHY THIS IS RIGHT

This patient has a recent history of recurrent herpes simplex infection followed 1-2 weeks later by an acute skin rash, which is classic for erythema multiforme (EM). EM is an immune-mediated hypersensitivity reaction, most commonly triggered by HSV reactivation. The characteristic lesions are target (iris) lesions with concentric rings, usually involving the extremities. Patients are often systemically well, afebrile, and without significant mucosal involvement in EM minor-matching this case.

Why the other options are incorrect:

- A. Disseminated herpes simplex infection - Occurs in neonates or immunocompromised patients; presents with fever and systemic illness.
- C. Primary HIV infection - Causes a generalized maculopapular rash with fever, sore throat, and lymphadenopathy.
- D. Stevens-Johnson syndrome - Severe, drug-induced, with prominent mucosal erosions and systemic toxicity.

QUESTION

A female presented in dermatology OPD with acne that is not resolving on oral isotretinoin and antibiotics therapy. Which of the following is the next best step among the following options?

- A Look for dietary triggers
- B Evaluate for hyperandrogenism**
- C Check for antibiotic resistance
- D Look for drug triggers

CORRECT

RIGHT ANSWER

- B. Evaluate for hyperandrogenism**

WHY THIS IS RIGHT

Refractory acne in females (not responding to isotretinoin + antibiotics) -> always evaluate for underlying hyperandrogenism.

- o Persistent, severe, or treatment-resistant acne often indicates hormonal etiology
 - o Common causes:
 - § PCOS (most common)
 - § Congenital adrenal hyperplasia
 - § Androgen-secreting tumors (rare)
 - Clinical clues suggesting hyperandrogenism:
 - o Irregular menstrual cycles
 - o Hirsutism
 - o Androgenic alopecia
 - o Sudden onset or severe acne
 - Next steps in evaluation:
 - o Serum testosterone
 - o DHEAS
 - o LH/FSH ratio (PCOS)
 - Management implication: Add hormonal therapy (OCPs, spironolactone) rather than escalating antibiotics/isotretinoin
- Why not others:
- Dietary triggers -> mild/moderate acne, not resistant severe acne
 - Antibiotic resistance -> already on isotretinoin (not primarily antibiotic-dependent)
 - Drug triggers -> consider, but less likely in classic persistent female acne

QUESTION

After using a hair dye a lady developed a skin reaction as shown in the image. Which of the following chemicals among given options is responsible for this condition?



A Pollen

B Chromates

C Balsam of Peru

D Para-Phenylenediamine

CORRECT

RIGHT ANSWER

OK

D. Para-Phenylenediamine

WHY THIS IS RIGHT

Allergic contact dermatitis following hair dye use is most commonly caused by para-phenylenediamine (PPD).

- Mechanism: Type IV (delayed) hypersensitivity reaction
- Typical presentation:

- o Pruritic, erythematous, edematous rash
- o Involves scalp margins, forehead, ears, and neck (sites of dye contact/spread)
- PPD is a potent sensitizer used in permanent hair dyes
- Also cross-reacts with:

- o Azo dyes
- o Local anesthetics (benzocaine)
- o Sulfonamides

Why not others:

- Pollen -> Type I hypersensitivity (allergic rhinitis, not contact dermatitis)
- Chromates -> Cement/contact dermatitis (construction workers)
- Balsam of Peru -> Fragrance allergy

QUESTION

An adolescent male came with complaints of lesions all over the face and back, which were predominantly comedones. What is the most effective treatment for this condition?



A Systemic doxycycline

CORRECT

B Systemic isotretinoin

C Topical Dapsone

D Systemic Azithromycin

RIGHT ANSWER

OK

A. Systemic doxycycline

WHY THIS IS RIGHT

An adolescent with multiple comedones (open/closed) on face and back has acne vulgaris (comedonal/papulopustular type).

- Pathogenesis (4 key factors):

- o ↑ Sebum production
- o Follicular hyperkeratinization → comedone formation
- o Cutibacterium acnes proliferation
- o Inflammation
- Most effective treatment: Systemic doxycycline → for moderate inflammatory acne

Therapy approach:

- Mild (comedonal) → topical retinoids ± benzoyl peroxide
- Moderate (papulopustular) → oral antibiotics (doxycycline)
- Severe/nodulocystic → oral isotretinoin (definitive)

Why not others:

- Isotretinoin → reserved for severe/refractory cases
- Topical dapsone → mild/moderate inflammatory acne
- Azithromycin → alternative, not first-line

QUESTION

A patient presents with annular lesions on the skin. Which of the following conditions is least likely to present with annular lesions?

A Tinea corporis

B Porokeratosis

C Pityriasis rosea

D Urticaria

CORRECT

RIGHT ANSWER

OK D. Urticaria

WHY THIS IS RIGHT

Annular (ring-shaped) lesions are classically seen in several dermatological conditions due to central clearing with peripheral activity.

Common causes of annular lesions:

- Tinea corporis -> ringworm with central clearing and active scaly margin
- Porokeratosis -> annular plaques with keratotic ridge (cornoid lamella)
- Pityriasis rosea -> annular/oval lesions with collarette scaling

Least likely:

- Urticaria -> transient wheals, not true annular lesions; lesions are fleeting and change within hours

QUESTION

A 24-year-old patient presents with a well-defined, round, violaceous patch on the thigh. The lesion healed with hyperpigmentation previously and has reappeared at the exact same site after taking an analgesic tablet for a headache. What is the most likely diagnosis?



A Cutaneous mastocytosis

B Fixed drug eruption

CORRECT

C Herpes simplex infection

D Erythema multiforme

RIGHT ANSWER

OK B. Fixed drug eruption

WHY THIS IS RIGHT

A fixed drug eruption (FDE) is a drug-induced hypersensitivity reaction characterized by:

- Reappearance of lesions at the exact same site upon re-exposure to the offending drug (hallmark feature)
- Well-defined, round/oval violaceous or erythematous patches/plaques
- Healing with residual hyperpigmentation

Common triggers: Analgesics (NSAIDs), antibiotics (sulfonamides, tetracyclines), antiepileptics

Why not other options:

- Cutaneous mastocytosis: Multiple lesions, Darier sign positive, no drug relation
- Herpes simplex: Painful grouped vesicles, not a fixed violaceous patch, no drug trigger
- Erythema multiforme: Multiple target lesions, symmetrical, not at same exact site

QUESTION

Crisaborole is a topical agent used for mild to moderate atopic dermatitis. It acts by inhibiting which of the following enzymes?

A Calcineurin

B Phosphodiesterase-4

CORRECT

C Janus kinase (JAK)

D Dihydrofolate reductase

RIGHT ANSWER

OK

B. Phosphodiesterase-4

WHY THIS IS RIGHT

Crisaborole is a topical phosphodiesterase-4 (PDE-4) inhibitor used for mild to moderate atopic dermatitis. By inhibiting PDE-4, it increases intracellular cyclic AMP (cAMP) levels, which reduces the release of pro-inflammatory cytokines (e.g., TNF- α , IL-2, IL-12), thereby decreasing inflammation and pruritus in eczematous skin.

QUESTION

| All are correct regarding miliaria crystallina, except:

- A** Obstruction occurs at the level of stratum corneum
- B** Presents as superficial clear vesicles without inflammation
- C** Common in hot humid climate
- D** Obstruction occurs at the level of stratum spinosum

CORRECT

RIGHT ANSWER

OK

D. Obstruction occurs at the level of stratum spinosum

WHY THIS IS RIGHT

Miliaria crystallina is a superficial sweat gland obstruction disorder, often seen in hot, humid climates.

Miliaria types are classified by the depth of sweat duct obstruction:

- Crystallina -> stratum corneum
- Rubra -> stratum spinosum (pruritic, erythematous)
- Profunda -> dermal-epidermal junction

QUESTION

| Which of the following statements about the following condition is false?



- A** Also known as Quincke's disease
- B** Associated with increased histamine release
- C** Wheals and itching do not occur
- D** Non-Pitting edema of face, lips and mucous membranes

CORRECT

RIGHT ANSWER

OK

B. Associated with increased histamine release

WHY THIS IS RIGHT

The condition described is angioedema, specifically hereditary or bradykinin-mediated angioedema (often non-allergic).

Key features include:

- Non-pitting edema of the face, lips, and mucous membranes
- Also called Quincke's disease
- Wheals and itching are absent

In hereditary or bradykinin-mediated angioedema, the swelling is not caused by histamine release, unlike allergic angioedema. That's why statement B is false.

QUESTION

| What condition does the following patient likely have?



A Urticaria pigmentosa

B Urticarial vasculitis

C **Acute urticaria**

CORRECT

D Cholinergic urticaria

RIGHT ANSWER

OK C. Acute urticaria

WHY THIS IS RIGHT

This patient likely presents with transient, pruritic wheals (hives) that appear suddenly and resolve within 24 hours, consistent with acute urticaria. It is usually IgE-mediated, triggered by allergens, infections, or medications, and the lesions are erythematous, edematous, and migratory.

Why the other options are incorrect:

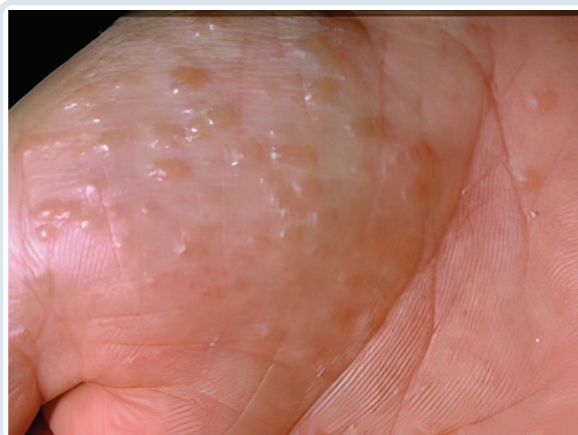
A. Urticaria pigmentosa - A form of cutaneous mastocytosis; lesions are brownish macules or papules, positive Darier sign, chronic course.

B. Urticarial vasculitis - Lesions last >24 hours, often painful or burning, may leave residual hyperpigmentation, and show vasculitis on biopsy.

D. Cholinergic urticaria - Triggered by heat, exercise, or sweating; lesions are typically small (<5 mm), punctate papules, not generalized hives.

QUESTION

| A 27-year-old male presents with the following lesion. What is the likely diagnosis?



A Pompholyx

CORRECT

B Asteatotic eczema

C Nummular eczema

D Atopic eczema

RIGHT ANSWER

OK

A. Pompholyx

WHY THIS IS RIGHT

This patient has vesicular eruptions on the hands or sides of the fingers, often pruritic and sometimes with weeping or scaling. Pompholyx (dyshidrotic eczema) is characterized by small, deep-seated vesicles that can coalesce, typically triggered by stress, sweating, or allergens, and is more common in young adults.

Why the other options are incorrect:

B. Asteatotic eczema - Causes dry, cracked “crazy-paving” skin, mainly in elderly, not vesicles.

C. Nummular eczema - Coin-shaped plaques, usually scaly but not vesicular.

D. Atopic eczema - Chronic, flexural involvement, usually ill-defined plaques, not deep-seated vesicles.

QUESTION

A 17-year-old girl presents with lesions on her face as shown in the image. Chest and back are normal. What is the most suitable management plan?



- A** Oral isotretinoin
- B** Topical isotretinoin
- C** Topical antibiotic + topical isotretinoin
- D** Oral antibiotic + topical isotretinoin

CORRECT

RIGHT ANSWER

OK

D. Oral antibiotic + topical isotretinoin

WHY THIS IS RIGHT

This 17-year-old girl has inflammatory acne confined to the face (papules/pustules), with no truncal involvement, but the lesions are significant enough to warrant systemic therapy. For moderate inflammatory acne, the recommended regimen is a short course of oral antibiotics (eg, doxycycline/erythromycin) to reduce *Cutibacterium acnes* and inflammation, combined with a topical retinoid (topical isotretinoin/tretinoin) to normalize follicular keratinization and prevent new comedones. This combination gives faster and more sustained control.

Why the other options are incorrect:

- A. Oral isotretinoin - Reserved for severe nodulocystic or refractory acne.
- B. Topical isotretinoin alone - Insufficient for moderate inflammatory acne.
- C. Topical antibiotic + topical isotretinoin - Suitable for mild acne, not moderate disease.

QUESTION

A 15-year-old girl comes to the physician for a follow-up evaluation. She has multiple erythematous pustules and nodules over her face, for which she has received erythromycin and topical benzoyl peroxide. She is concerned that the therapy is ineffective. The physician recommends a drug on the condition that the patient agrees to use oral contraceptives. The molecular structure of the drug most likely recommended by the physician closely resembles a drug used to treat which of the following conditions?

A EGFR-positive non-small cell lung cancer

B Acute promyelocytic leukaemia

CORRECT

C BRAF-positive metastatic melanoma

D HER2-positive gastric cancer

RIGHT ANSWER

OK

B. Acute promyelocytic leukaemia

WHY THIS IS RIGHT

This adolescent has severe nodulocystic acne refractory to antibiotics and benzoyl peroxide. The requirement for oral contraceptive use strongly points to isotretinoin, a highly teratogenic retinoid. Isotretinoin is a vitamin A (retinoic acid) derivative, and its molecular structure closely resembles all-trans retinoic acid (ATRA), which is used to treat acute promyelocytic leukemia (APL) by inducing differentiation of malignant promyelocytes (PML-RARA fusion).

Why the other options are incorrect:

- A. EGFR-positive NSCLC - Treated with erlotinib/gefitinib (tyrosine kinase inhibitors).
- C. BRAF-positive metastatic melanoma - Treated with vemurafenib/dabrafenib (BRAF inhibitors).
- D. HER2-positive gastric cancer - Treated with trastuzumab (monoclonal antibody).

QUESTION

A 6-year-old boy is brought to the physician for evaluation of bilateral erythematous skin lesions on the flexures of the elbows and knees. He has been scratching the areas frequently. He has had similar lesions intermittently for the last 2 years. A photograph of the lesions on the back of the knees is shown below. This patient's skin lesions are most likely associated with which of the following?



A Reversible decrease in FEV1/FVC ratio

CORRECT

B Glomerular subepithelial immune complex deposition

C IgA anti-tissue transglutaminase antibodies

D Hepatocyte infection with hepatitis C virus

RIGHT ANSWER

OK **A. Reversible decrease in FEV1/FVC ratio**

WHY THIS IS RIGHT

This child has atopic dermatitis, suggested by chronic, pruritic, erythematous lesions on flexural surfaces (elbows, knees) with recurrent flares over years. Atopic dermatitis is part of the atopic triad-eczema, allergic rhinitis, and asthma-all driven by IgE-mediated (type I) hypersensitivity. Therefore, these patients commonly have or later develop asthma, characterized by reversible airway obstruction, seen as a reversible decrease in the FEV₁/FVC ratio on spirometry.

Why the other options are incorrect:

- B. Glomerular subepithelial immune complex deposition - Seen in membranous nephropathy, not atopy.
- C. IgA anti-tissue transglutaminase antibodies - Associated with celiac disease/ dermatitis herpetiformis (intensely pruritic, extensor surfaces).
- D. Hepatocyte infection with hepatitis C virus - Linked to lichen planus, not atopic dermatitis.

QUESTION

A 16-year-old boy comes to the OPD due to a skin condition. For the last 3 years, he has had small "pimples" on the posterior surface of her upper arms. The lesions are associated with mild pruritus during the winter months but are otherwise asymptomatic, and the patient is primarily concerned due to their appearance when he wears short-sleeved tops. Which of the following is the most likely diagnosis of this patient's skin condition?



- A Folliculitis
- B Keratosis pilaris**
- C Miliaria
- D Pseudofolliculitis

CORRECT

RIGHT ANSWER

- OK **B. Keratosis pilaris**

WHY THIS IS RIGHT

This adolescent has small, rough, follicular papules on the posterior upper arms present for years, with mild pruritus in winter and mainly a cosmetic concern. This is classic keratosis pilaris, caused by keratin plugging of hair follicles. It commonly affects adolescents, worsens in cold/dry weather, and improves with emollients, keratolytics (urea, lactic acid), or topical retinoids. It is benign and often associated with atopy.

Why the other options are incorrect:

- A. Folliculitis - Inflammatory/infectious; usually painful or tender pustules.
- C. Miliaria - Sweat duct obstruction; acute, erythematous or vesicular rash in heat.
- D. Pseudofolliculitis - Ingrown hairs, common after shaving (beard/neck).

QUESTION

| **SAPHO syndrome includes all except:**

A Seborrhea

CORRECT

B Acne

C Pustulosis

D Hyperostosis

RIGHT ANSWER

OK

A. Seborrhea

WHY THIS IS RIGHT

SAPHO syndrome stands for Synovitis, Acne, Pustulosis, Hyperostosis, and Osteitis. It is a chronic inflammatory disorder involving skin and osteoarticular manifestations. The dermatologic features classically include severe acne (acne conglobata/fulminans) and palmoplantar pustulosis, while the skeletal features include hyperostosis and osteitis, especially of the anterior chest wall.

Why the other options are incorrect:

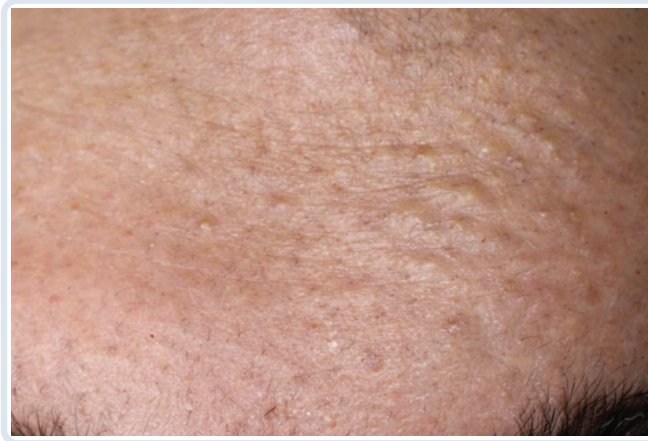
B. Acne - A core component of SAPHO.

C. Pustulosis - Palmoplantar pustulosis is characteristic.

D. Hyperostosis - One of the defining skeletal features.

QUESTION

The 20-year-old young female presented to the OPD with the following forehead lesions. Which of the following methods won't help with the treatment of various stages of this condition?



A Topical benzoyl peroxide

B Topical fluocinolone

CORRECT

C Topical tazarotene

D Topical antibiotics

RIGHT ANSWER

OK

B. Topical fluocinolone

WHY THIS IS RIGHT

The lesions described on the forehead in a young woman are typical of acne vulgaris, which has lesions at various stages (comedones, papules, pustules). Effective treatment targets follicular hyperkeratinization, excess sebum, and *Cutibacterium acnes*. Topical corticosteroids like fluocinolone are not used in acne because they do not treat the underlying pathology and can actually worsen acne (steroid acne) with prolonged use.

Why the other options are correct:

- Topical benzoyl peroxide - Bactericidal against *C. acnes* and reduces resistance.
- Topical tazarotene - Normalizes follicular keratinization; effective for comedones.
- Topical antibiotics - Reduce *C. acnes* and inflammation.

QUESTION

A 22-year-old woman comes to the office due to several years of persistent facial blemishing that has failed to respond to over-the-counter treatment. Which of the following most likely contributed to the pathogenesis of this patient's skin condition?



- A** Androgen-induced involution of sebaceous glands
- B** Bacterial degradation of apocrine gland secretions
- C** Estrogen-stimulated secretory function of sebaceous glands
- D** Proliferation of lipid-utilizing bacteria within pilosebaceous follicles

CORRECT

RIGHT ANSWER

- OK** **D. Proliferation of lipid-utilizing bacteria within pilosebaceous follicles**

WHY THIS IS RIGHT

This patient has chronic acne vulgaris, suggested by long-standing facial blemishes refractory to OTC therapy. Acne pathogenesis involves follicular hyperkeratinization, increased sebum production, inflammation, and overgrowth of *Cutibacterium* (*Propionibacterium*) *acnes*, a lipid-utilizing anaerobe that thrives in sebaceous, pilosebaceous follicles. The bacteria break down triglycerides in sebum into free fatty acids, triggering local inflammation and comedone formation.

Why the other options are incorrect:

- A. Androgen-induced involution of sebaceous glands - Androgens increase, not involute, sebaceous activity.
- B. Bacterial degradation of apocrine secretions - Causes body odor, not acne.
- C. Estrogen-stimulated sebaceous secretion - Estrogen actually suppresses sebaceous gland activity.

QUESTION

Which of the following are side effects of topical corticosteroids?

1. Hypertrichosis
2. Acneiform eruption
3. Atrophy
4. Bluish-grey skin discolouration

A 1 and 4 only

B 4 only

C 1, 2 and 3 only

CORRECT

D 2 and 3 only

RIGHT ANSWER

OK C. 1, 2 and 3 only

WHY THIS IS RIGHT

Topical corticosteroids commonly cause local adverse effects due to their anti-mitotic and vasoconstrictive actions on the skin. Hypertrichosis occurs from stimulation of hair follicles, acneiform eruptions result from follicular occlusion and altered sebum dynamics, and skin atrophy develops due to inhibition of fibroblast activity and reduced collagen synthesis. These effects are more common with potent steroids, prolonged use, occlusion, and application on thin skin (face, groin).

- Bluish-grey skin discolouration - Seen with minocycline, amiodarone, silver (argyria), not topical steroids.

QUESTION

A 35-year-old woman develops the following rash 10 days after using a specific hair dye and bleaching agent. What is the hypersensitivity reaction involved?



A Type 1

B Type 2

C Type 3

D Type 4

CORRECT

RIGHT ANSWER

OK

D. Type 4

WHY THIS IS RIGHT

This reaction represents allergic contact dermatitis, most commonly caused by chemicals in hair dyes (eg, paraphenylenediamine) and bleaching agents. The rash appearing 10 days after exposure indicates a delayed-type (Type IV) hypersensitivity reaction, which is T-cell mediated rather than antibody mediated. Sensitized CD4⁺ T lymphocytes release cytokines on re-exposure, leading to erythema, pruritus, vesiculation, and eczema-like rash. This delayed onset is the key clue distinguishing it from immediate allergic reactions.

QUESTION

A 19-year-old girl with severe nodulocystic acne is started on oral isotretinoin. After 6 weeks, she shows dramatic reduction in new lesions. Which one of the following mechanisms best explains the response?

- A Suppression of TNF- α and IL-17 pathways
- B Inhibition of keratinocyte proliferation and normalization of follicular keratinization**
- C Reduced mast cell degranulation
- D Direct inhibition of *Propionibacterium acnes* protein synthesis

CORRECT

RIGHT ANSWER

- B. Inhibition of keratinocyte proliferation and normalization of follicular keratinization**

WHY THIS IS RIGHT

Isotretinoin (13-cis-retinoic acid) is the most effective drug for severe nodulocystic acne because it targets the primary pathogenic event—abnormal follicular keratinization. It reduces keratinocyte proliferation, promotes normal differentiation, and prevents comedone formation. Additionally, it causes marked sebaceous gland atrophy and decreased sebum production, indirectly reducing *Cutibacterium* (*Propionibacterium*) *acnes**. These combined effects explain the dramatic reduction in new lesions seen within weeks.

QUESTION

A young patient presents with multiple dark brown to black macules on the lips and buccal mucosa. Colonoscopy reveals multiple hamartomatous polyps. What is the most likely diagnosis?

A

Peutz-Jeghers syndrome

CORRECT

B

Familial adenomatous polyposis (FAP)

C

Gardner syndrome

D

Cronkhite-Canada syndrome

RIGHT ANSWER

OK

A. Peutz-Jeghers syndrome

WHY THIS IS RIGHT

Presence of multiple dark brown to black macules on the lips and buccal mucosa with hamartomatous intestinal polyps is characteristic of Peutz-Jeghers syndrome.

It is caused by mutation in the STK11 gene.

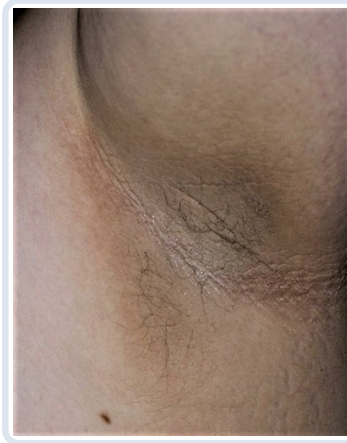
- Mucocutaneous pigmentation (lips, buccal mucosa, fingers) is an early clue
- Polyps are hamartomatous, commonly in small intestine
- Increased risk of multiple malignancies (GI, pancreas, breast, ovary)
- Inheritance is autosomal dominant

Why not others:

- Familial adenomatous polyposis has adenomatous polyps without pigmentation
- Gardner syndrome has osteomas, fibromas, and dental abnormalities
- Cronkhite-Canada syndrome is non-hereditary with alopecia, nail atrophy, and diarrhea

QUESTION

A female patient with a BMI of 35 kg/m² presents to you with a skin lesion in the axilla as shown below. Which of the following condition is she most likely to be suffering from?



A Hypothyroidism

B Metabolic syndrome

CORRECT

C Addison's disease

D Hyperparathyroidism

RIGHT ANSWER

OK

B. Metabolic syndrome

WHY THIS IS RIGHT

Acanthosis nigricans (velvety hyperpigmented plaques in axilla) is a marker of insulin resistance and is strongly associated with metabolic syndrome.

- o Hyperpigmented, velvety thickened skin
- o Common sites: axilla, neck, groin
- o Hyperinsulinemia -> stimulates keratinocyte & dermal fibroblast proliferation
- Associated conditions:

- o Metabolic syndrome (most common)
- o Obesity
- o Type 2 diabetes mellitus
- o PCOS

Why not others:

- o Hypothyroidism -> dry skin, not velvety hyperpigmentation
- o Addison's disease -> generalized pigmentation (not velvety plaques)
- o Hyperparathyroidism -> no such skin findings

QUESTION

A 20-year-old man presents with a stable hypopigmented patch on his trunk that has been present since birth. He reports no change in size or color of the lesion over time. On examination, the lesion is hypopigmented but not depigmented, and Wood's lamp examination reveals a dull white accentuation. Diascopy is Inconclusive / negative (no blanching). There is no sensory loss or scaling. Which of the following is the most likely diagnosis?



A Indeterminate leprosy

B **Nevus depigmentosus**

CORRECT

C Nevus anemicus

D Vitiligo

RIGHT ANSWER

OK **B. Nevus depigmentosus**

WHY THIS IS RIGHT

A congenital, stable hypopigmented patch that does not change over time, with dull accentuation on Wood's lamp and no sensory loss or scaling, is characteristic of nevus depigmentosus.

• Key features:

- o Present since birth
- o Non-progressive (stable size and color)
- o Hypopigmented (not depigmented)
- o Wood's lamp -> dull white (not chalky bright)

Differentiation:

- Vitiligo -> acquired, progressive, depigmented, bright white on Wood's lamp
- Indeterminate leprosy -> sensory loss ± hypopigmented patch
- Nevus anemicus -> vascular anomaly, blanches on diascopy

QUESTION

An overweight 13-year-old girl has the following blackish discoloration on her neck, as shown in the image below. What is this condition and its association?



CORRECT

- A** Acanthosis nigricans - Insulin resistance
- B** Stria albicans - Cushing syndrome
- C** Xeroderma pigmentosum - Freckles
- D** Café au lait spots - McCune Albright syndrome

RIGHT ANSWER

- OK** **A. Acanthosis nigricans - Insulin resistance**

WHY THIS IS RIGHT

Acanthosis nigricans presents as hyperpigmented, velvety thickening of skin, commonly seen on the neck and flexural areas, especially in overweight/obese individuals.

- Key association: Insulin resistance (seen in obesity, type 2 diabetes, PCOS)
- Pathophysiology: Hyperinsulinemia -> stimulates keratinocyte & dermal proliferation

Clinical importance:

- Acts as a cutaneous marker of metabolic syndrome
- In rare cases (sudden onset, extensive) -> may indicate internal malignancy (paraneoplastic)

Differentiation:

- Striae (Cushing) -> linear stretch marks
- Xeroderma pigmentosum -> photosensitivity + freckles
- Café-au-lait spots -> smooth bordered pigmented macules

QUESTION

Which form of vitiligo is initially progressive and later becomes stable and non-progressive?

- A** Mixed
- B** Segmental
- C** Acrofacial
- D** Focal

CORRECT

RIGHT ANSWER

- B. Segmental**

WHY THIS IS RIGHT

Segmental vitiligo is characterized by an initial rapid progression followed by long-term stability.

- Pattern: Unilateral, dermatomal/segmental distribution
- Course:

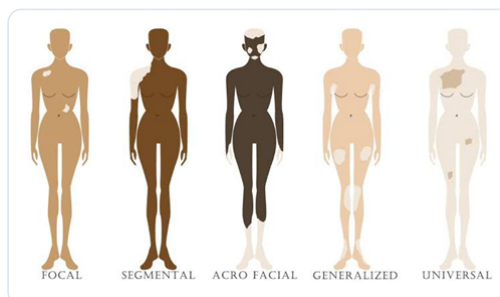
- o Early phase -> rapid spread

- o Later -> stabilizes and becomes non-progressive

- Onset: Usually earlier age than other types
- Response to therapy: Often less responsive to medical therapy, better suited for surgical treatments (grafting) once stable

Contrast with other types:

- Non-segmental vitiligo (acrofacial, generalized, mixed) -> chronic, relapsing, unpredictable course
- Focal vitiligo -> localized but may progress or evolve



QUESTION

| Which of the following is a poor prognostic factor for vitiligo?

- A** Unilateral, dermatomal macules
- B** Absence of Koebner phenomenon
- C** Mucosal involvement
- D** Segmental pattern

CORRECT

RIGHT ANSWER

- OK** C. Mucosal involvement

WHY THIS IS RIGHT

In vitiligo, certain features are associated with a poorer prognosis (harder to treat, less likelihood of repigmentation):

- Mucosal involvement - Particularly lip, oral, or genital mucosa; these areas respond poorly to therapy.
- Bilateral, generalized, or acral/extremity involvement - Worse prognosis than localized lesions.
- Koebner phenomenon presence - Indicates active disease, often more refractory.

Why the other options are incorrect:

- A. Unilateral, dermatomal macules - Typical of segmental vitiligo, usually stable and responds better.
- B. Absence of Koebner phenomenon - Suggests less active disease -> better prognosis.
- D. Segmental pattern - Often localized and stable, with higher chance of repigmentation -> favorable prognosis.

QUESTION

| Which of the following is not a feature of the triad of poikiloderma?

A Lichenification

CORRECT

B Pigmentary changes

C Telangiectasia

D Skin atrophy

RIGHT ANSWER

OK

A. Lichenification

WHY THIS IS RIGHT

Poikiloderma is defined by a classic triad of skin atrophy, pigmentary changes (both hypo- and hyperpigmentation), and telangiectasia, giving the skin a mottled, thin, and fragile appearance. It is seen in conditions like dermatomyositis, cutaneous T-cell lymphoma, chronic radiodermatitis, and genodermatoses.

QUESTION

A 32-year-old woman comes to the physician because of a 2-month history of fatigue and yellowish discoloration of her skin. During this period, she has also had a 6 kg weight gain. She does not smoke and drinks one glass of wine daily. She follows a vegan diet that consists mainly of spinach, kale, and sweet potatoes. Physical examination shows yellowing of the skin. Her hands are cold to the touch and her nails appear brittle. Eye examination shows no abnormalities. Which of the following findings is most likely in this patient's serum?

- A** A. Decreased haptoglobin concentration
- B** B. Increased alkaline phosphatase concentration
- C** C. Positive antimitochondrial antibodies
- D** D. Increased beta-carotene concentration

CORRECT

RIGHT ANSWER

- OK** D. D. Increased beta-carotene concentration

WHY THIS IS RIGHT

She has yellow skin without eye involvement (no scleral icterus) plus fatigue, weight gain, cold hands, brittle nails -> consistent with hypothyroidism. Hypothyroidism reduces conversion of β -carotene to vitamin A, causing carotenemia. A vegan diet high in spinach/ kale/sweet potatoes (β -carotene-rich) further increases this, leading to yellow-orange skin (often prominent on palms/soles) with normal sclera.

Why the other options are incorrect:

- A. Decreased haptoglobin -> hemolysis (would also raise indirect bilirubin; not diet- related; scleral icterus possible).
- B. Increased alkaline phosphatase -> cholestasis/biliary disease; typically jaundice with scleral icterus $\pm$ pruritus.
- C. Positive antimitochondrial antibodies -> primary biliary cholangitis; cholestatic labs, pruritus, scleral icterus.

QUESTION

26-year-old man presents with skin lesions as shown in the image below, and adds that new lesions are appearing at sites of injury. What is the underlying pathophysiology?



A Failure of synthesis melanin

B Loss of melanocytes

CORRECT

C Loss of melanosomes

D Loss of keratinocytes

RIGHT ANSWER

OK

B. Loss of melanocytes

WHY THIS IS RIGHT

The description suggests vitiligo, especially with new lesions appearing at sites of injury (Koebner phenomenon). Vitiligo is an autoimmune disorder characterized by immune-mediated destruction of melanocytes, leading to well-defined depigmented macules and patches. Because melanocytes are absent, melanin cannot be produced in affected areas, explaining the chalk-white appearance. The Koebner phenomenon further supports vitiligo, as trauma triggers lesion development due to local immune activation.

Why the other options are incorrect:

- A) Failure of melanin synthesis - Seen in albinism; melanocyte number is normal.
- C) Loss of melanosomes - Seen in Chediak-Higashi syndrome, not vitiligo.
- D) Loss of keratinocytes - Occurs in blistering disorders (e.g., pemphigus), not depigmentation.

QUESTION

Patient presents with ulcerative lesion near nose/medial canthus. What is the probable diagnosis?



A Lentigo maligna melanoma

B Basal cell carcinoma

CORRECT

C Squamous cell carcinoma

D Nevus

RIGHT ANSWER

OK

B. Basal cell carcinoma

WHY THIS IS RIGHT

- Basal cell carcinoma commonly occurs on sunexposed facial areas
- It is slow-growing, locally invasive
- Presents as: Ulcer with raised, rolled edges , +/- central ulceration ("rodent ulcer")

❑ Option A: Lentigo maligna melanoma
Typically a *Flat, pigmented lesion,* not ulcerative.

❑ Option C: Squamous cell carcinoma
Ulcerative, but: more indurated, irregular edges; Less common at medial canthus compared to BCC

❑ Option D: Nevus : It is a Benign mole , does not present as an ulcerative lesion.

QUESTION

Which of the following descriptions best characterizes the oral lesions seen in Kaposi sarcoma?

- A White, flat patches
- B Ulcerative painful lesions
- C Red, smooth, non-elevated macules

D Purple-red, elevated lesions

CORRECT

RIGHT ANSWER

D. Purple-red, elevated lesions

WHY THIS IS RIGHT

Oral lesions in Kaposi sarcoma are classically purple-red, elevated vascular lesions.

- o Caused by Human herpesvirus-8 (HHV-8)
- o Strongly associated with HIV/AIDS
- Oral lesion characteristics:
 - o Purple / violaceous (red-blue) color
 - o Elevated plaques or nodules
 - o Commonly involve hard palate, gingiva, tongue
- Pathology:
 - o Vascular tumor -> proliferation of spindle cells and blood vessels
 - o Extravasated RBCs -> characteristic color

Why not others:

- o White flat patches -> leukoplakia
- o Ulcerative painful lesions -> aphthous ulcers, malignancy
- o Red non-elevated macules -> erythema, not vascular tumor

QUESTION

A patient is diagnosed with multiple anogenital warts, and the biopsy reveals squamous atypia. Among the various human papillomavirus types, which ones are classified as high-risk?

A HPV 2

B HPV 18

CORRECT

C HPV 6

D HPV 11

RIGHT ANSWER

OK

B. HPV 18

WHY THIS IS RIGHT

High-risk Human Papillomavirus (HPV) types are oncogenic and associated with dysplasia and malignancy (especially cervical and anogenital cancers).

- High-risk HPV types (must remember):

- o HPV 16, 18 (most important)

- o Also: 31, 33, 45

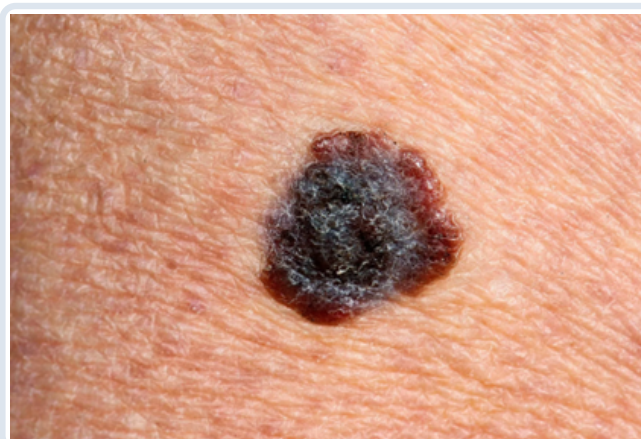
- Low-risk HPV types:

- o HPV 6, 11 -> cause anogenital warts (condyloma acuminata)

- o HPV 2 -> causes cutaneous warts

QUESTION

Which of the following is associated with the clinical condition shown in the image?



A

Cataract

B

Glaucoma

C

Malignant Melanoma

CORRECT

D

Basal cell carcinoma

RIGHT ANSWER

OK

C. Malignant Melanoma

WHY THIS IS RIGHT

Irregular, asymmetrical, darkly pigmented lesion -> think malignant melanoma.

- o Variegated pigmentation (black/brown)
- o Irregular borders
- o Large, expanding lesion on sun-exposed area
- o Highly aggressive tumor of melanocytes
- o Early metastasis via lymphatics and blood
- ABCDE criteria (must know):

- o A - Asymmetry
- o B - Border irregularity
- o C - Color variation
- o D - Diameter > 6 mm
- o E - Evolution (change over time)

Why not others:

- Cataract -> lens opacity, no skin lesion
- Glaucoma -> optic neuropathy
- Basal cell carcinoma -> pearly papule with telangiectasia, not heavily pigmented like this

QUESTION

A 10-year-old child is brought in with complaints of freckling over sun-exposed areas and increased sensitivity to sunlight. On examination, there are multiple freckles on the face and arms, and two lesions on the nose and cheek that are biopsied and confirmed as basal cell carcinomas. There is no history of immunodeficiency or family history of skin cancer. Which of the following DNA repair pathways is most likely defective in this patient?



- A DNA mismatch repair
- B Base excision repair
- C DNA double-strand break repair

D Nucleotide excision repair

CORRECT

RIGHT ANSWER

D. Nucleotide excision repair

WHY THIS IS RIGHT

A child with photosensitivity, freckling in sun-exposed areas, and early skin cancers (BCC) is characteristic of xeroderma pigmentosum (XP).

- Underlying defect:

- o Nucleotide excision repair (NER) pathway defect

- o Inability to repair UV-induced thymine dimers

- Clinical features:

- o Extreme photosensitivity

- o Early freckling and pigmentation

- o Early-onset skin malignancies (BCC, SCC, melanoma)

- Pathophysiology:

UV damage accumulates -> DNA mutations -> malignancy

Why not others:

- Mismatch repair -> Lynch syndrome

- Base excision repair -> small base damage

- Double-strand break repair -> BRCA-related cancers

QUESTION

A middle aged Indian male came to Derma OPD with the lesion as shown in the image below. What is the most likely diagnosis?



A Squamous cell carcinoma

B Basal cell carcinoma

CORRECT

C Melanoma

D Discoid lupus erythematosus

RIGHT ANSWER

OK

B. Basal cell carcinoma

WHY THIS IS RIGHT

A pearly papule with central ulceration and rolled borders, especially on a sun-exposed area of the face, is characteristic of basal cell carcinoma (BCC).

• Typical features:

- o Pearly/translucent nodule
- o Rolled (raised) edges
- o Central ulcer ("rodent ulcer")
- o Surface telangiectasia

• Risk factors:

- o Chronic UV exposure
- o Fair skin, increasing age

• Behavior:

- o Locally invasive, very slow growing
- o Rarely metastasizes

Differentials:

- Squamous cell carcinoma -> ulcer with everted edges, more aggressive
- Melanoma -> pigmented lesion with ABCDE changes
- Discoid lupus -> erythematous plaques with scarring, no pearly borders

QUESTION

| What is the most common site of melanoma in Indians?

A Trunk

B Hands and feet

CORRECT

C Genitals

D Face

RIGHT ANSWER

OK B. Hands and feet

WHY THIS IS RIGHT

In Indians and other darker-skinned populations, the most common type of melanoma is acral lentiginous melanoma, which predominantly occurs on palms, soles, and nail beds (hands and feet).

Key points:

- Unlike Caucasians (where trunk is common), melanoma in Indians is more frequent on acral sites
- Often not related to sun exposure
- Commonly presents late -> poorer prognosis

QUESTION

A patient shows brown-black pigmentation of nail with extension onto surrounding skin (Hutchinson sign). This indicates:

- A Benign nail nevus
- B Superficial spreading melanoma
- C Subungual melanoma
- D Bowen disease

CORRECT

RIGHT ANSWER

- OK
- C. Subungual melanoma

WHY THIS IS RIGHT

(Hutchinson sign = periungual spread = melanoma until proven otherwise) Hutchinson sign is the pigmentation of the proximal or lateral nail fold extending from the nail plate, seen in subungual melanoma. It indicates malignant melanocytic proliferation under the nail. This is a red flag for melanoma and requires prompt biopsy and excision, as early diagnosis is critical for prognosis.

Why the other options are incorrect:

- A. Benign nail nevus - Usually confined to the nail plate; does not involve the surrounding skin.
- B. Superficial spreading melanoma - Typically affects cutaneous surfaces, not subungual areas.
- D. Bowen disease - Squamous cell carcinoma in situ; rarely pigmented, not associated with Hutchinson sign.

QUESTION

Which of the following is not a criterion to assess the malignant potential of the lesion shown below?



A Asymmetry

B Irregular border

C Changing colour

D Diameter > 3 mm

CORRECT

RIGHT ANSWER

OK

D. Diameter > 3 mm

WHY THIS IS RIGHT

The malignant potential of melanocytic lesions (melanoma screening) is assessed using the ABCDE criteria:

- A - Asymmetry
- B - Border irregularity
- C - Color variation
- D - Diameter ≥ 6 mm
- E - Evolving (change in size, shape, color, symptoms)

A diameter >3 mm is not a recognized criterion; the accepted cutoff is ≥ 6 mm (about the size of a pencil eraser).

QUESTION

A 55-year-old man with HIV comes to the physician because of multiple lesions on his chest and lower extremities. The lesions have progressively increased in size and are not painful or pruritic. Current medications include abacavir, dolutegravir, and lamivudine. A photograph of the lesions is shown below. A skin biopsy shows multiple spindle-shaped cells and lymphocytic infiltrate. Which of the following is the most appropriate pharmacotherapy?



A Ganciclovir

B Nitazoxanide

C Alpha-interferon

CORRECT

D Acyclovir

RIGHT ANSWER

OK C. Alpha-interferon

WHY THIS IS RIGHT

This HIV-positive patient has Kaposi sarcoma, suggested by multiple non-painful, non-pruritic violaceous lesions, and biopsy showing spindle-shaped cells with lymphocytic infiltrate. Kaposi sarcoma is caused by HHV-8 infection and commonly occurs in immunocompromised patients, especially those with HIV. In addition to optimizing ART, α -interferon is an appropriate pharmacologic therapy as it has antiviral, immunomodulatory, and antitumor effects, particularly useful in patients with relatively preserved immune function.

Why the other options are incorrect:

- A. Ganciclovir - Used for CMV, not HHV-8-associated Kaposi sarcoma.
- B. Nitazoxanide - Antiparasitic (eg, *Cryptosporidium*), no role here.
- D. Acyclovir - Active against HSV/VZV, ineffective against Kaposi sarcoma.

QUESTION

A 79-year-old woman comes to the OPD due to bleeding from an ulcerative lesion on her right nipple that she first noticed several months ago. The lesion is itchy and is slowly increasing in size. Examination shows a crusty, thickened, erythematous, and ulcerated nodule with evidence of hyperpigmentation. Changes extend to the surrounding areola. Excisional biopsy reveals relatively well-circumscribed aggregates of large, polygonal, pleomorphic cells with abundant mitotic activity and surrounding necrosis. S-100 and HMB-45 stains are diffusely positive. Which of the following is the most likely diagnosis?

A Basal cell carcinoma

B Melanoma

CORRECT

C Paget disease of the breast

D Seborrheic keratosis

RIGHT ANSWER

OK

B. Melanoma

WHY THIS IS RIGHT

This elderly woman has a slowly enlarging, ulcerated, bleeding, hyperpigmented lesion of the nipple-areolar complex. Histology shows large pleomorphic polygonal cells with high mitotic activity and necrosis, and immunohistochemistry is strongly positive for S-100 and HMB-45, which are classic markers of melanocytic tumors. These findings are diagnostic of melanoma, which can rarely involve the nipple and may clinically mimic Paget disease.

Why the other options are incorrect:

A. Basal cell carcinoma - Shows basaloid cells with peripheral palisading; HMB-45 negative.

C. Paget disease of the breast - Involves malignant glandular cells (Paget cells) within epidermis; CK7 positive, not melanocytic markers.

D. Seborrheic keratosis - Benign "stuck-on" lesion; no ulceration, necrosis, or melanocytic markers.

QUESTION

40-year-old man comes to the office due to a slightly painful sore on his lip which has been enlarging for the last 3 months. Past medical history is unremarkable. The patient does not use alcohol, tobacco, or illicit drugs. He works as a farmer and has no new sexual contacts. Vital signs are normal. Examination shows a 3x7-mm partially encrusted ulcer in the vermilion zone of the lower lip, surrounded by a 6x12-mm area of induration. There are no palpable submental or submandibular lymph nodes, and the remainder of the physical examination is unremarkable. Biopsy of this lesion will most likely show which of the following?



- A Giant cells in a Tzanck preparation
- B Granulomatous inflammation
- C Invasive cords of squamous cells with keratin pearls**
- D Invasive clusters of spindle cells surrounded by palisaded basal cells

CORRECT

RIGHT ANSWER

- OK
- C. Invasive cords of squamous cells with keratin pearls**

WHY THIS IS RIGHT

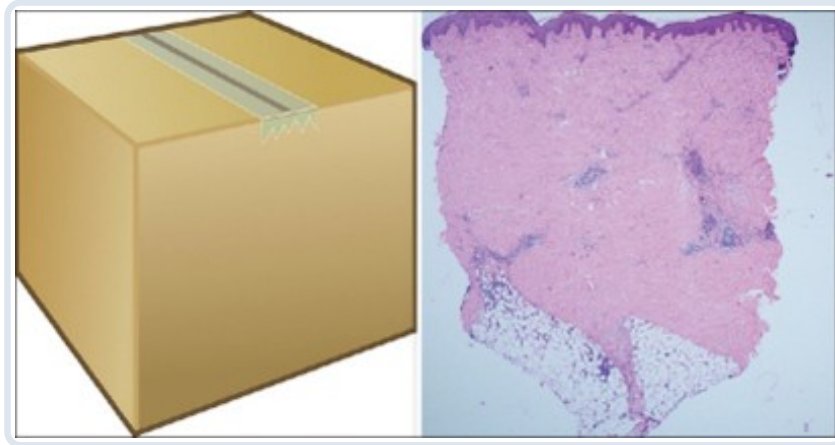
This patient has a slowly enlarging, indurated ulcer on the lower lip present for 3 months, which is classic for squamous cell carcinoma (SCC) of the lip. The lower lip is particularly prone due to chronic sun (UV) exposure, especially in outdoor workers like farmers. SCC typically presents as a nonhealing ulcer or crusted lesion with induration. Histopathology shows malignant squamous cells invading the dermis, forming keratin pearls, which are concentric layers of keratinized cells.

Why the other options are incorrect:

- A. Giant cells in a Tzanck preparation - Seen in HSV infection; lesions are acute, painful vesicles, not chronic ulcers.
- B. Granulomatous inflammation - Suggests infections like TB, leishmaniasis, or syphilis, which do not fit this presentation.
- D. Invasive clusters of spindle cells surrounded by palisaded basal cells - Describes basal cell carcinoma, more common on upper lip/face and rarely ulcerates like this.

QUESTION

While preparing a slide for histopathological examination (HPE), a box-like gross appearance is seen in the scanner view. In which of the following conditions is this seen?



A Lichen nitidus

B Lichen planopilaris

C **Morphea**

CORRECT

D Lichen amyloidosis

RIGHT ANSWER

OK

C. Morphea

WHY THIS IS RIGHT

A “box-like” appearance on scanner view (low power HPE) is characteristic of morphea (localized scleroderma).

• Histopathology hallmark:

- o Thickened, sclerotic collagen bundles in dermis
 - o Loss of adnexal structures
 - o Dermis appears homogeneous and squared-off -> “box-like”
- Clinical correlation:

- o Localized indurated, ivory-colored plaques
- o No systemic involvement (unlike systemic sclerosis)

Differentiation:

- Lichen nitidus -> “ball and claw” appearance
- Lichen planus -> saw-tooth rete ridges
- Lichen amyloidosis -> amyloid deposits in papillary dermis

QUESTION

A 6-year-old girl is brought in with dark, non-itchy hyperkeratotic papules over her elbows, knees, and buttocks. These areas are hyperpigmented, and on examination, her hair is dry, sparse, and lacks lustre. Her parents mention a diet low in vegetables and fruits. Which of the following is the most appropriate next step in evaluating this child?



A Ophthalmologic examination

CORRECT

B Vitamin D3 levels

C Skin biopsy

D Vitamin B12 levels

RIGHT ANSWER

OK **A. Ophthalmologic examination**

WHY THIS IS RIGHT

A child with hyperkeratotic follicular papules (phrynoderma), dry sparse hair, and poor diet (low fruits/vegetables) suggests Vitamin A deficiency.

• Cutaneous features:

o Phrynoderma ("toad skin") -> rough follicular hyperkeratosis on elbows, knees, buttocks

o Hyperpigmentation

o Dry, lusterless hair

• Systemic importance:

o Vitamin A deficiency also affects eyes -> xerophthalmia, Bitot spots, night blindness

• Most appropriate next step:

o Ophthalmologic examination -> to detect early ocular involvement

Why not others:

• Vitamin D3 -> rickets (bone changes)

• Vitamin B12 -> anemia, neuropathy

• Skin biopsy -> not required (clinical diagnosis)

QUESTION

A 23-year-old woman presents with an indurated plaque with central atrophy on her cheek, which has gradually increased in size over the past several months. Examination shows a well-defined erythematous plaque with scarring and crusting. A chest X-ray reveals apical calcifications. There is no history of trauma or animal exposure. Based on the skin lesion and radiologic findings, which of the following is the most appropriate confirmatory test? (NEET PG 2025)



A Slit skin smear

B Probe test

C PCR

CORRECT

D Mantoux test

RIGHT ANSWER

OK C. PCR

WHY THIS IS RIGHT

An indurated plaque with central atrophy, scarring, and crusting on the face with evidence of past tuberculosis (apical calcifications on chest X-ray) suggests lupus vulgaris (cutaneous tuberculosis).

• Clinical features:

- o Slowly progressive plaque
- o Central atrophy with peripheral activity
- o Apple jelly nodules on diascopy (classic)

• Most appropriate confirmatory test:

- o PCR for *Mycobacterium tuberculosis* -> most sensitive and specific

Why not others:

- Slit skin smear -> leprosy
- Probe test -> sinus tract evaluation (e.g., osteomyelitis)
- Mantoux test -> indicates exposure, not confirmatory

QUESTION

Match the Dermatological disorders in Column A with their respective investigations in Column B:

Disease	Investigation
1. Tinea	a. Biopsy
2. Lepromatous leprosy	b. KOH mount
3. Lupus vulgaris	c. Slit Skin Smear
4. Allergic dermatitis	d. Patch test

A 1-b, 2-c, 3-a, 4-d

CORRECT

B 1-b, 2-d, 3-a, 4-c

C 1-d, 2-c, 3-b, 4-a

D 1-d, 2-c, 3-a, 4-b

RIGHT ANSWER

OK A. 1-b, 2-c, 3-a, 4-d

WHY THIS IS RIGHT

Different dermatological conditions have specific first-line diagnostic investigations based on their etiology:

- Tinea (dermatophyte infection) -> KOH mount

- o Demonstrates fungal hyphae

- Lepromatous leprosy -> Slit skin smear

- o Shows acid-fast bacilli (*Mycobacterium leprae*) and bacterial index

- Lupus vulgaris (cutaneous tuberculosis) -> Biopsy

- o Reveals granulomas with caseation

- Allergic contact dermatitis -> Patch test

- o Identifies specific allergens (Type IV hypersensitivity)

Disease	Investigation
1. Tinea	b. KOH mount
2. Lepromatous leprosy	c. Slit Skin Smear
3. Lupus vulgaris	a. Biopsy
4. Allergic dermatitis	d. Patch test

QUESTION

Which of the following are recognized local side effects associated with the use of topical corticosteroids? (INICET MAY 2025)

1. Blue grey discolouration of skin
2. Atrophy
3. Acneiform eruption
4. Hypertrichosis

A 1 and 2 only

B 2 and 3 only

C 1, 2 and 3 only

D 2, 3 and 4 only

CORRECT

RIGHT ANSWER

OK D. 2, 3 and 4 only

WHY THIS IS RIGHT

Topical corticosteroids commonly cause local cutaneous adverse effects due to their anti-proliferative and immunosuppressive actions on skin.

Recognized local side effects:

- Skin atrophy -> thinning, wrinkling, telangiectasia (most important)
- Acneiform eruptions -> steroid acne, folliculitis
- Hypertrichosis -> excessive hair growth

Not typical:

- Blue-grey discoloration -> seen in conditions like drug-induced pigmentation (e.g., minocycline), not a steroid effect

QUESTION

A 40-year-old man noticed a slow, progressive, asymptomatic plaque on the side of the neck. He did not complain of any other systemic signs and symptoms. Which of the following tests are useful in this case?

- a) HIV
- b) Skin biopsy
- c) KOH mount
- d) Chest X-ray



A a and b

B b, c and d

C a, b and c

D b and d

CORRECT

RIGHT ANSWER

OK

D. b and d

WHY THIS IS RIGHT

A slowly progressive, asymptomatic plaque on the neck with scarring and raised borders suggests cutaneous tuberculosis (Lupus vulgaris).

Key investigations:

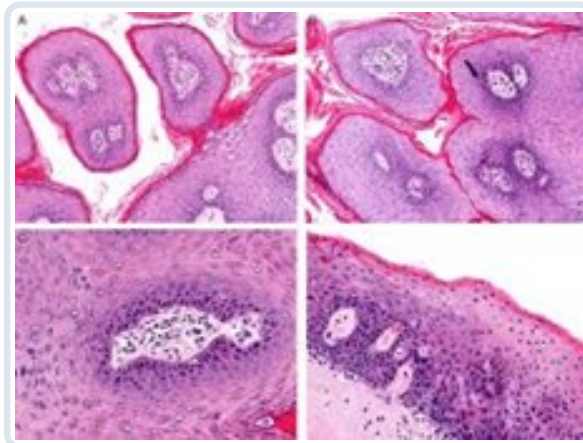
- Skin biopsy -> confirms diagnosis (granulomas with caseation)
- Chest X-ray -> to look for associated pulmonary TB

Why not others:

- KOH mount -> for fungal infections (not TB)
- HIV test -> not primary diagnostic test here

QUESTION

A histological examination slide shows the layers of the epidermis with hyperkeratosis and a scaly lesion involving the stratum corneum. The lesion produces verrucae. Which of the following statements about this virus is true?



- A** It is an RNA virus
- B** It is an oncogenic virus
- C** It is an enveloped DNA virus
- D** No vaccine is available

CORRECT

RIGHT ANSWER

- OK** **B. It is an oncogenic virus**

WHY THIS IS RIGHT

Cutaneous warts (verrucae) are caused by Human Papillomavirus (HPV):

- Non-enveloped, double-stranded DNA virus
- Infects keratinocytes -> hyperkeratosis, papillomatosis (warts)
- Certain types (HPV 16, 18) are oncogenic
- Vaccines are available (against high-risk types)
- Warts + hyperkeratosis -> think HPV infection

QUESTION

Match the following signs with their conditions:

Condition	Sign
A. Cutaneous mastocytosis	i. Auspitz sign
B. Psoriasis	ii. Carpet track sign
C. Kwashiorkor	iii. Darier's sign
D. Discoid lupus erythematosus	iv. Flag sign

A A-iii, B-i, C-iv, D-ii

CORRECT

B A-i, B-ii, C-iii, D-iv

C A-ii, B-i, C-iv, D-iii

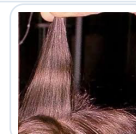
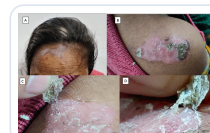
D A-iii, B-ii, C-i, D-iv

RIGHT ANSWER

OK A. A-iii, B-i, C-iv, D-ii

WHY THIS IS RIGHT

- Characteristic dermatological signs help in rapid clinical diagnosis:
- Psoriasis -> Auspitz sign
- (Pinpoint bleeding on removal of scales)
- Discoid lupus erythematosus -> Carpet track sign
- (Keratin plugs on undersurface of scales)
- Cutaneous mastocytosis -> Darier's sign
- (Urtication on rubbing lesion)
- Kwashiorkor -> Flag sign
- (Alternating bands of depigmented hair)



QUESTION

A 73-year-old female complains of intense itching, and a white plaque is the genital region as shown below with histology showing collagen deposition. What is the diagnosis?



A Lichen planus

B Lichen sclerosus

CORRECT

C Candidiasis

D Vulvar leukoplakia

RIGHT ANSWER

OK

B. Lichen sclerosus

WHY THIS IS RIGHT

Lichen sclerosus is a chronic inflammatory dermatosis commonly affecting postmenopausal women, presenting with:

- Intense pruritus (hallmark symptom)
- Porcelain-white, atrophic plaques in the genital area
- Fragile skin -> fissures, bleeding

Histology:

- Thinning of epidermis
- Subepithelial collagen (hyalinization) deposition
- Band-like inflammatory infiltrate

Clinical importance: Associated with risk of vulvar squamous cell carcinoma

Why not others:

- Lichen planus: Violaceous lesions, Wickham striae, no collagen deposition
- Candidiasis: Red, moist with discharge, not white atrophic plaque
- Vulvar leukoplakia: Nonspecific term, no specific histology

QUESTION

I All of the following conditions may present as a collodion baby, except:

- A** Lamellar ichthyosis
- B** Congenital ichthyosiform erythroderma
- C** Self-healing collodion baby
- D** Ichthyosis vulgaris

CORRECT

RIGHT ANSWER

- OK** **D. Ichthyosis vulgaris**

WHY THIS IS RIGHT

The collodion baby phenotype is a presentation, not a diagnosis. It may evolve into:

- Lamellar ichthyosis
- Congenital ichthyosiform erythroderma
- Self-healing collodion baby (rare)

But Ichthyosis vulgaris does NOT present as a collodion baby.

Instead, it presents later in infancy or childhood with fine white scales on extensor surfaces

QUESTION

A 34-year-old patient presents with multiple soft, pedunculated skin lesions on the trunk. On palpation, these lesions are compressible and invaginate into the skin upon gentle pressure, creating a characteristic "button-hole" appearance. This finding is most commonly associated with which of the following conditions?

A Systemic lupus erythematosus

B Discoid lupus erythematosus

C Neurofibromatosis type 1

CORRECT

D Psoriasis

RIGHT ANSWER

OK C. Neurofibromatosis type 1

WHY THIS IS RIGHT

The description of multiple soft, pedunculated, compressible skin lesions that invaginate into the skin on pressure ("button-hole sign") is classic for cutaneous neurofibromas.

This sign occurs because neurofibromas are unencapsulated tumors of peripheral nerve sheath origin that are loosely attached to surrounding tissue, allowing them to be pushed inward. Neurofibromatosis type 1 (NF1) is an autosomal dominant disorder caused by mutations in the NF1 gene (chromosome 17).

Why the other options are incorrect:

A. Systemic lupus erythematosus - Causes photosensitive rashes, not compressible nodules.

B. Discoid lupus erythematosus - Produces scarring plaques, not pedunculated lesions.

D. Psoriasis - Presents with erythematous plaques and silvery scales, no button-hole sign.

QUESTION

A 23-year-old man who notes recurrent severe nosebleeds is found to have pink spider-like lesions on his oral and nasal mucosa, face, and arms. The patient most likely suffers from:

A Von Recklinghausen's disease

B Neurofibromatosis type 2

C Osler-Weber-Rendu syndrome

CORRECT

D Von Hippel-Lindau disease

RIGHT ANSWER

OK

C. Osler-Weber-Rendu syndrome

WHY THIS IS RIGHT

This patient's recurrent severe epistaxis combined with pink, spider-like lesions (telangiectasias) on the oral and nasal mucosa, face, and arms is classic for Osler-Weber-Rendu syndrome, also known as hereditary hemorrhagic telangiectasia (HHT). It is an autosomal dominant vascular disorder caused by abnormal blood vessel formation, leading to fragile telangiectasias and arteriovenous malformations that bleed easily.

Why the other options are incorrect:

- A. Von Recklinghausen's disease (NF1) - Features café-au-lait spots and neurofibromas, not mucosal telangiectasias.
- B. Neurofibromatosis type 2 - Characterized by bilateral acoustic neuromas.
- D. Von Hippel-Lindau disease - Causes hemangioblastomas and renal cell carcinoma, not epistaxis with telangiectasias.

QUESTION

A 43-year-old man comes to the clinic for evaluation of a healed forehead laceration. On examination, the scar is pink, firm, and mildly raised, without surrounding erythema or edema; it does not extend beyond the initial wound borders. The patient is reassured that the scar should flatten over the following months. The process by which this occurs relies mostly on enhanced cellular production of which of the following?

A Metalloproteinases

CORRECT

B Plasminogen activator

C Reactive oxygen species

D Tumor necrosis factor-alpha

RIGHT ANSWER

OK A. Metalloproteinases

WHY THIS IS RIGHT

This patient has a hypertrophic scar-pink, firm, mildly raised, and confined to the original wound borders. Over months, hypertrophic scars flatten and soften due to remodeling of extracellular matrix, primarily through increased activity of matrix metalloproteinases (MMPs). MMPs degrade excess type III collagen deposited during early wound healing and help reorganize collagen fibers, leading to scar regression and flattening.

Why the other options are incorrect:

- B. Plasminogen activator - Involved in fibrinolysis, not collagen remodeling.
- C. Reactive oxygen species - Promote tissue injury and inflammation, not scar resolution.
- D. TNF- α - Pro-inflammatory cytokine; excess would worsen fibrosis rather than remodel it.

QUESTION

Arrange the following corticosteroids in the order of increasing $t_{1/2}$ (low to high).

1. Dexamethasone
2. Hydrocortisone
3. Betamethasone
4. Prednisolone

A 3, 4, 1, 2

B 2, 3, 4, 1

C 2, 3, 1, 4

D 2, 4, 1, 3

CORRECT

RIGHT ANSWER

OK D. 2, 4, 1, 3

WHY THIS IS RIGHT

The source quiz contains the placeholder "\$19" here and does not include a written explanation for this item.

QUESTION

Identify the finding associated with the condition shown in the image below which is characterized by development of itching and eczema.



- A Gottron's papule
- B Renbeok phenomenon
- C Isomorphic phenomenon
- D Meyerson phenomenon**

CORRECT

RIGHT ANSWER

- OK
- D. Meyerson phenomenon**

WHY THIS IS RIGHT

Meyerson phenomenon refers to the development of itching and eczematous inflammation surrounding a pre-existing skin lesion, most commonly a melanocytic nevus or seborrheic keratosis. It presents as an erythematous, scaly, pruritic halo around the lesion and is thought to be due to a localized immune-mediated eczematous reaction. The central lesion itself remains benign, and symptoms usually respond well to topical corticosteroids.

Why the other options are incorrect:

- A. Gottron's papule - Pathognomonic of dermatomyositis, seen over knuckles.
- B. Renbök phenomenon - Improvement of one dermatosis in the presence of another.
- C. Isomorphic (Koebner) phenomenon - New lesions appearing at sites of trauma.

QUESTION

A 35-year-old man comes to the OPD for evaluation of red skin lesions on his chest. The lesions are not itchy or painful, and no other family members have skin lesions. Skin findings are shown below. Which of the following is the most likely diagnosis?



A Cavernous hemangioma

B Cherry hemangioma

CORRECT

C Spider angioma

D Strawberry hemangioma

RIGHT ANSWER

OK B. Cherry hemangioma

WHY THIS IS RIGHT

Cherry hemangiomas (senile angiomas) are common, benign vascular proliferations seen in adults, typically appearing as multiple small, bright red to violaceous papules on the trunk, especially the chest and back. They are asymptomatic, non-itchy, non-painful, and increase in number with age. They represent dilated capillaries and venules in the papillary dermis and have no familial or systemic association, matching this patient's presentation.

Why the other options are incorrect:

- A. Cavernous hemangioma - Large, deep vascular lesions present from childhood, often compressible and not small superficial papules.
- C. Spider angioma - Has a central arteriole with radiating vessels, often blanches with pressure; associated with liver disease or pregnancy.
- D. Strawberry hemangioma - Infantile hemangioma seen in infants, not adults; often regresses spontaneously.

QUESTION

A young patient presents with an oval, waxy white plaque on his right shoulder as shown below. He reports having a VZV lesion on the same site a few months ago. What is this phenomenon known as?



A Reverse-Koebner's phenomenon

B Isotopic response

CORRECT

C Isomorphic response

D Pseudo-Koebner's phenomenon

RIGHT ANSWER

OK

B. Isotopic response

WHY THIS IS RIGHT

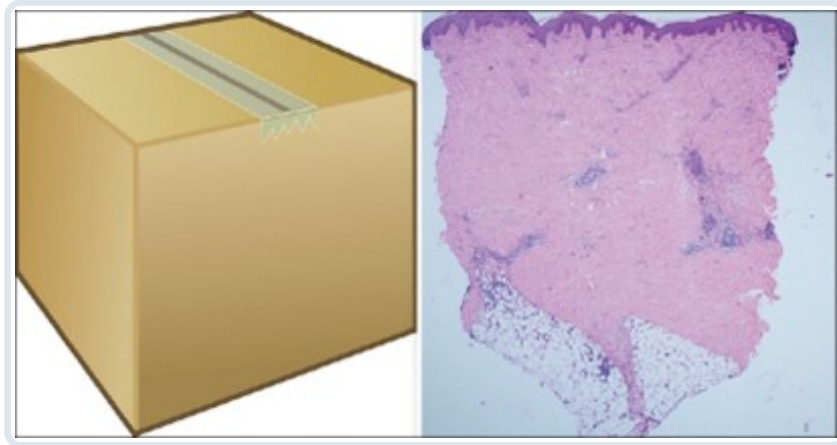
This describes Wolf's isotopic response, where a new, unrelated skin disorder develops at the site of a previously healed skin lesion, most classically after herpes zoster or varicella-zoster virus (VZV) infection. In this case, the patient had a VZV lesion months earlier, and now develops an oval, waxy white plaque at the same site-commonly seen with conditions like morphea, granuloma annulare, or lichen sclerosus occurring as an isotopic response.

Why the other options are incorrect:

- A. Reverse Koebner phenomenon - Refers to clearing of lesions at sites of trauma.
- C. Isomorphic response (Koebner phenomenon) - Same disease appearing at trauma sites (e.g., psoriasis after scratching).
- D. Pseudo-Koebner phenomenon - Spread of infectious lesions (e.g., warts) along trauma lines.

QUESTION

While preparing a slide for histopathological examination (HPE), a box-like gross appearance is seen in the scanner view. In which of the following conditions is this seen?



A Lichen nitidus

B Lichen planopilaris

C **Morphea**

CORRECT

D Lichen amyloidosis

RIGHT ANSWER

OK

C. Morphea

WHY THIS IS RIGHT

A “box-like” appearance on scanner view (low power HPE) is characteristic of morphea (localized scleroderma).

• Histopathology hallmark:

- o Thickened, sclerotic collagen bundles in dermis
 - o Loss of adnexal structures
 - o Dermis appears homogeneous and squared-off -> “box-like”
- Clinical correlation:

- o Localized indurated, ivory-colored plaques
- o No systemic involvement (unlike systemic sclerosis)

Differentiation:

- Lichen nitidus -> “ball and claw” appearance
- Lichen planus -> saw-tooth rete ridges
- Lichen amyloidosis -> amyloid deposits in papillary dermis

QUESTION

A 6-year-old girl is brought in with dark, non-itchy hyperkeratotic papules over her elbows, knees, and buttocks. These areas are hyperpigmented, and on examination, her hair is dry, sparse, and lacks lustre. Her parents mention a diet low in vegetables and fruits. Which of the following is the most appropriate next step in evaluating this child?



A Ophthalmologic examination

CORRECT

B Vitamin D3 levels

C Skin biopsy

D Vitamin B12 levels

RIGHT ANSWER

OK **A. Ophthalmologic examination**

WHY THIS IS RIGHT

A child with hyperkeratotic follicular papules (phrynoderma), dry sparse hair, and poor diet (low fruits/vegetables) suggests Vitamin A deficiency.

• Cutaneous features:

- o Phrynoderma ("toad skin") -> rough follicular hyperkeratosis on elbows, knees, buttocks
- o Hyperpigmentation
- o Dry, lusterless hair
- Systemic importance:

- o Vitamin A deficiency also affects eyes -> xerophthalmia, Bitot spots, night blindness
- Most appropriate next step:

- o Ophthalmologic examination -> to detect early ocular involvement

Why not others:

- Vitamin D3 -> rickets (bone changes)
- Vitamin B12 -> anemia, neuropathy
- Skin biopsy -> not required (clinical diagnosis)

QUESTION

A 23-year-old woman presents with an indurated plaque with central atrophy on her cheek, which has gradually increased in size over the past several months. Examination shows a well-defined erythematous plaque with scarring and crusting. A chest X-ray reveals apical calcifications. There is no history of trauma or animal exposure. Based on the skin lesion and radiologic findings, which of the following is the most appropriate confirmatory test? (NEET PG 2025)



A Slit skin smear

B Probe test

C PCR

CORRECT

D Mantoux test

RIGHT ANSWER

OK C. PCR

WHY THIS IS RIGHT

An indurated plaque with central atrophy, scarring, and crusting on the face with evidence of past tuberculosis (apical calcifications on chest X-ray) suggests lupus vulgaris (cutaneous tuberculosis).

• Clinical features:

- o Slowly progressive plaque
- o Central atrophy with peripheral activity
- o Apple jelly nodules on diascopy (classic)

• Most appropriate confirmatory test:

- o PCR for *Mycobacterium tuberculosis* -> most sensitive and specific

Why not others:

- Slit skin smear -> leprosy
- Probe test -> sinus tract evaluation (e.g., osteomyelitis)
- Mantoux test -> indicates exposure, not confirmatory

QUESTION

Match the Dermatological disorders in Column A with their respective investigations in Column B:

Disease	Investigation
1. Tinea	a. Biopsy
2. Lepromatous leprosy	b. KOH mount
3. Lupus vulgaris	c. Slit Skin Smear
4. Allergic dermatitis	d. Patch test

A 1-b, 2-c, 3-a, 4-d

CORRECT

B 1-b, 2-d, 3-a, 4-c

C 1-d, 2-c, 3-b, 4-a

D 1-d, 2-c, 3-a, 4-b

RIGHT ANSWER

OK A. 1-b, 2-c, 3-a, 4-d

WHY THIS IS RIGHT

Different dermatological conditions have specific first-line diagnostic investigations based on their etiology:

- Tinea (dermatophyte infection) -> KOH mount

o Demonstrates fungal hyphae

- Lepromatous leprosy -> Slit skin smear

o Shows acid-fast bacilli (*Mycobacterium leprae*) and bacterial index

- Lupus vulgaris (cutaneous tuberculosis) -> Biopsy

o Reveals granulomas with caseation

- Allergic contact dermatitis -> Patch test

o Identifies specific allergens (Type IV hypersensitivity)

Disease	Investigation
1. Tinea	b. KOH mount
2. Lepromatous leprosy	c. Slit Skin Smear
3. Lupus vulgaris	a. Biopsy
4. Allergic dermatitis	d. Patch test

QUESTION

Which of the following are recognized local side effects associated with the use of topical corticosteroids? (INICET MAY 2025)

1. Blue grey discolouration of skin
2. Atrophy
3. Acneiform eruption
4. Hypertrichosis

A 1 and 2 only

B 2 and 3 only

C 1, 2 and 3 only

D 2, 3 and 4 only

CORRECT

RIGHT ANSWER

OK

D. 2, 3 and 4 only

WHY THIS IS RIGHT

Topical corticosteroids commonly cause local cutaneous adverse effects due to their anti-proliferative and immunosuppressive actions on skin.

Recognized local side effects:

- Skin atrophy -> thinning, wrinkling, telangiectasia (most important)
- Acneiform eruptions -> steroid acne, folliculitis
- Hypertrichosis -> excessive hair growth

Not typical:

- Blue-grey discoloration -> seen in conditions like drug-induced pigmentation (e.g., minocycline), not a steroid effect

QUESTION

A 40-year-old man noticed a slow, progressive, asymptomatic plaque on the side of the neck. He did not complain of any other systemic signs and symptoms. Which of the following tests are useful in this case?

- a) HIV
- b) Skin biopsy
- c) KOH mount
- d) Chest X-ray



A a and b

B b, c and d

C a, b and c

D b and d

CORRECT

RIGHT ANSWER

OK

D. b and d

WHY THIS IS RIGHT

A slowly progressive, asymptomatic plaque on the neck with scarring and raised borders suggests cutaneous tuberculosis (Lupus vulgaris).

Key investigations:

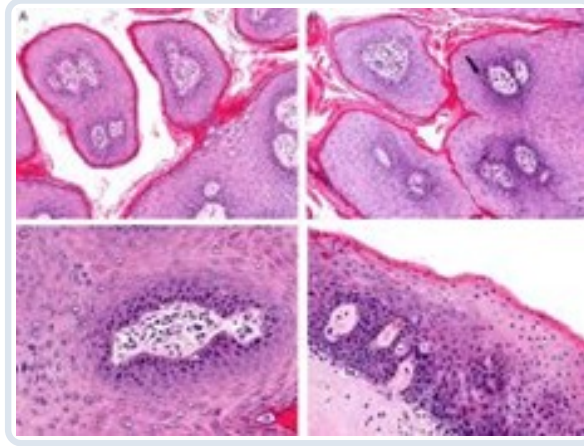
- Skin biopsy -> confirms diagnosis (granulomas with caseation)
- Chest X-ray -> to look for associated pulmonary TB

Why not others:

- KOH mount -> for fungal infections (not TB)
- HIV test -> not primary diagnostic test here

QUESTION

A histological examination slide shows the layers of the epidermis with hyperkeratosis and a scaly lesion involving the stratum corneum. The lesion produces verrucae. Which of the following statements about this virus is true?



- A** It is an RNA virus
- B** It is an oncogenic virus
- C** It is an enveloped DNA virus
- D** No vaccine is available

CORRECT

RIGHT ANSWER

- OK** **B. It is an oncogenic virus**

WHY THIS IS RIGHT

Cutaneous warts (verrucae) are caused by Human Papillomavirus (HPV):

- Non-enveloped, double-stranded DNA virus
- Infects keratinocytes -> hyperkeratosis, papillomatosis (warts)
- Certain types (HPV 16, 18) are oncogenic
- Vaccines are available (against high-risk types)
- Warts + hyperkeratosis -> think HPV infection

QUESTION

Match the following signs with their conditions:

Condition	Sign
A. Cutaneous mastocytosis	i. Auspitz sign
B. Psoriasis	ii. Carpet track sign
C. Kwashiorkor	iii. Darier's sign
D. Discoid lupus erythematosus	iv. Flag sign

A A-iii, B-i, C-iv, D-ii

CORRECT

B A-i, B-ii, C-iii, D-iv

C A-ii, B-i, C-iv, D-iii

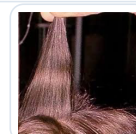
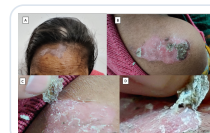
D A-iii, B-ii, C-i, D-iv

RIGHT ANSWER

OK A. A-iii, B-i, C-iv, D-ii

WHY THIS IS RIGHT

- Characteristic dermatological signs help in rapid clinical diagnosis:
- Psoriasis -> Auspitz sign
- (Pinpoint bleeding on removal of scales)
- Discoid lupus erythematosus -> Carpet track sign
- (Keratin plugs on undersurface of scales)
- Cutaneous mastocytosis -> Darier's sign
- (Urtication on rubbing lesion)
- Kwashiorkor -> Flag sign
- (Alternating bands of depigmented hair)



QUESTION

A 73-year-old female complains of intense itching, and a white plaque is the genital region as shown below with histology showing collagen deposition. What is the diagnosis?



A Lichen planus

B Lichen sclerosus

CORRECT

C Candidiasis

D Vulvar leukoplakia

RIGHT ANSWER

OK

B. Lichen sclerosus

WHY THIS IS RIGHT

Lichen sclerosus is a chronic inflammatory dermatosis commonly affecting postmenopausal women, presenting with:

- Intense pruritus (hallmark symptom)
- Porcelain-white, atrophic plaques in the genital area
- Fragile skin -> fissures, bleeding

Histology:

- Thinning of epidermis
- Subepithelial collagen (hyalinization) deposition
- Band-like inflammatory infiltrate

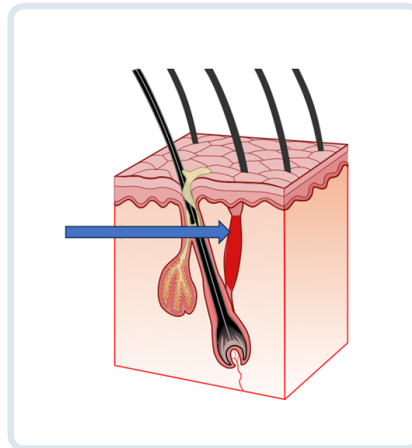
Clinical importance: Associated with risk of vulvar squamous cell carcinoma

Why not others:

- Lichen planus: Violaceous lesions, Wickham striae, no collagen deposition
- Candidiasis: Red, moist with discharge, not white atrophic plaque
- Vulvar leukoplakia: Nonspecific term, no specific histology

QUESTION

Identify the structures as marked in the image:



A Sebaceous glands

B Eccrine glands

C Errector pili muscle

CORRECT

D Apocrine glands

RIGHT ANSWER

OK

C. Errector pili muscle

WHY THIS IS RIGHT

The structure attached obliquely to the hair follicle is the arrector pili muscle.

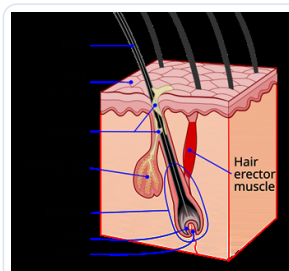
- Type: Smooth muscle
- Attachment: From dermis -> hair follicle
- Function:

- o Contraction causes hair to stand (piloerection -> "goosebumps")
- o Helps in sebum expulsion from sebaceous glands

Innervation: Sympathetic (autonomic nervous system)

Differentiation:

- Sebaceous glands -> sac-like, open into hair follicle
- Eccrine glands -> coiled tubular, open onto skin surface
- Apocrine glands -> large glands opening into hair follicles (axilla, groin)



QUESTION

A 24-year-old woman presents with recurrent painful nodules and foul-smelling discharge in the axilla. The lesions are located in areas rich in specialized sweat glands that become active after puberty and are associated with hair follicles. Which of the following sites predominantly contains these glands?

A Palms and soles

B Forehead

C Axilla

CORRECT

D Scalp

RIGHT ANSWER

OK C. Axilla

WHY THIS IS RIGHT

Why this is classic for apocrine glands:

- Location: Axilla, areola, anogenital region
- Secretion: Viscous, protein-rich -> odor after bacterial action
- Association: Open into hair follicles
- Activation: Puberty onward (androgen-dependent)
- Clinical correlate: Hidradenitis suppurativa (recurrent painful nodules, sinuses)

Option traps:

- A. Palms & soles -> Eccrine only (thermoregulation)
- B. Forehead -> Predominantly eccrine
- D. Scalp -> Mainly sebaceous + eccrine, not apocrine-dominant

QUESTION

Which of the following statements are correct?

- a. Epidermis can regenerate from deeper follicular cells such as hair follicles and sebaceous glands
- b. Stratum corneum is the outermost cellular layer
- c. Epidermis is ectodermal in origin
- d. Dermis and hypodermis are endodermal in origin

A a and b

B a and c

CORRECT

C b and c

D b and d

RIGHT ANSWER

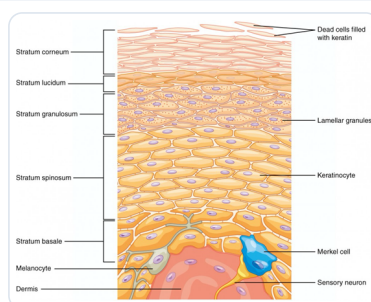
OK

B. a and c

WHY THIS IS RIGHT

The epidermis has the capacity to regenerate and has a distinct embryological origin.

- Regeneration: Epidermis can regenerate not only from basal keratinocytes but also from epithelial stem cells in adnexal structures (hair follicles, sebaceous glands) -> important in wound healing
- Embryology: Epidermis is derived from ectoderm
- Incorrect concepts:
 - Stratum corneum = outermost layer but consists of dead (anucleate) cells, so not a true “cellular” layer
 - Dermis and hypodermis arise from mesoderm, not endoderm



QUESTION

Irregular pitting of the nails with subungual hyperkeratosis is seen in?

A Lichen planus

B Psoriasis

CORRECT

C Vitiligo

D Alopecia areata

RIGHT ANSWER

OK B. Psoriasis

WHY THIS IS RIGHT

Nail changes in psoriasis classically include irregular pitting and subungual hyperkeratosis.

- o Nail pitting -> irregular, coarse pits
- o Subungual hyperkeratosis -> debris under nail
- o Onycholysis (separation of nail plate)
- o "Oil drop / salmon patch" discoloration
- Pathophysiology:
 - o Involvement of nail matrix -> pitting
 - o Involvement of nail bed -> hyperkeratosis & onycholysis

Differentiation from others:

- Lichen planus: longitudinal ridging, thinning, pterygium
- Alopecia areata: fine, regular nail pitting (less coarse)
- Vitiligo: no nail changes



QUESTION

A 23-year-old male came with complaints of orange hue over the body with hyperkeratotic perifollicular erythematous papules associated with scaling, which started near the face and slowly progressed to involve the entire body. Islands of sparing noted over the body. Palmoplantar keratoderma noted. Histology shows alternating orthokeratosis and parakeratosis. What is the most likely diagnosis?



A Mycosis fungoides

B Follicular psoriasis

C Pityriasis Rubra Pilaris

CORRECT

D Keratosis follicularis

RIGHT ANSWER

OK

C. Pityriasis Rubra Pilaris

WHY THIS IS RIGHT

Pityriasis rubra pilaris (PRP) is characterized by orange-red scaling plaques with follicular hyperkeratosis and distinctive clinical-histological features.

• Key clinical features:

- o Orange/salmon-colored plaques
- o Follicular hyperkeratotic papules
- o "Islands of sparing" (normal skin within lesions)
- o Palmoplantar keratoderma
- Histopathology (hallmark):
 - o Alternating orthokeratosis and parakeratosis (checkerboard pattern)

Differentiation:

- Psoriasis -> silvery scales, Auspitz sign, uniform parakeratosis
- Mycosis fungoides -> atypical lymphocytes, epidermotropism
- Keratosis follicularis (Darier disease) -> greasy papules, acantholysis

QUESTION

A 52-year-old man presents with a persistent white, reticulated oral mucosal lesion over the inner cheek for the past 6 months. He reports that it burns on consuming spicy foods. He is currently on several medications since few months. Examination reveals bilateral white lacy plaques on the buccal mucosa without ulceration or scrapability. Which of the following medications is most likely responsible for this oral lesion?



A Lithium

B Beta blockers

CORRECT

C Fluconazole

D Ciprofloxacin

RIGHT ANSWER

OK

B. Beta blockers

WHY THIS IS RIGHT

Bilateral white, lacy (reticular) lesions on buccal mucosa that are non-scrapable and cause burning are characteristic of oral lichen planus (Wickham striae).

- o Reticular white pattern (lace-like)
- o Bilateral symmetry
- o Non-scrapable
- o Burning sensation with spicy food
- Etiology:

- o Idiopathic or drug-induced (lichenoid reaction)
- Common drug triggers:

- o Beta blockers (most important here)
- o NSAIDs
- o ACE inhibitors
- o Antimalarials

Why not others:

- Fluconazole -> used to treat candidiasis (which is scrapable)
- Ciprofloxacin -> not classically associated
- Lithium -> more associated with psoriasis exacerbation

QUESTION

A young male, aged 24, has presented with asymptomatic scaly skin lesions on his back, symmetrically distributed. The provided images showcase the lesions. Can you identify the pattern of these skin lesions & the specific disease?



A Collarette scale - Christmas tree pattern - Pityriasis rosea

CORRECT

B Wickham's striae - Lichen planus

C Christmas tree pattern - Lichen planus

D Woronoff ring - Seborrheic dermatitis

RIGHT ANSWER

OK

A. Collarette scale - Christmas tree pattern - Pityriasis rosea

WHY THIS IS RIGHT

Pityriasis rosea presents with characteristic morphology + distribution pattern that helps in clinical diagnosis.

- Primary lesion (Herald patch):

- o Single large oval plaque
- o Collarette scale (fine scale at inner margin)

- Secondary eruption:

- o Multiple smaller lesions
- o Arranged along Langer's lines -> "Christmas tree pattern" on back
- Nature: Self-limiting, often viral (HHV-6/7 association)

Key differentiations:

- Wickham striae -> Lichen planus
- Seborrheic dermatitis -> greasy scales in seborrheic areas
- Christmas tree pattern is classic for Pityriasis rosea

QUESTION

A diabetic patient presents with whitish plaques in the oral cavity. A KOH mount of the lesion reveals budding yeast cells with pseudohyphae. Which of the following culture media is most appropriate for isolation of this organism?



A Chocolate agar

B Sabouraud's Dextrose Agar (SDA)

CORRECT

C Thayer-Martin medium

D Loeffler's serum slope

RIGHT ANSWER

OK

B. Sabouraud's Dextrose Agar (SDA)

WHY THIS IS RIGHT

Whitish scrapable plaques in the oral cavity with KOH showing budding yeast cells and pseudohyphae indicate Oral candidiasis most commonly due to *Candida albicans*

The most appropriate culture medium for isolation is Sabouraud's Dextrose Agar.

- *Candida* shows budding yeast with pseudohyphae on KOH mount
- Common in diabetics, immunocompromised patients, and after antibiotics
- Lesions are white and scrapable, leaving an erythematous base
- Sabouraud's dextrose agar is selective for fungi due to acidic pH
- Why not others:
- Chocolate agar is for fastidious bacteria
- Thayer-Martin medium is for *Neisseria* species
- Loeffler's serum slope is for *Corynebacterium diphtheriae*

QUESTION

A 4-year-old child is brought to the pediatric OPD with complaints of low-grade fever, poor appetite, and a sore throat for the past 2 days. On examination, there are multiple vesicular lesions on the palms, soles, and oral mucosa. The child attends daycare, and several other children have similar complaints. Neurological examination is normal. Which of the following is the most likely etiological agent?



A Human herpesvirus 6

B Coxsackievirus A16

CORRECT

C Varicella-zoster virus

D Parvo virus

RIGHT ANSWER

OK B. Coxsackievirus A16

WHY THIS IS RIGHT

A child with low-grade fever, sore throat, and vesicular lesions on the palms, soles, and oral mucosa is characteristic of Hand, foot and mouth disease.

The most common causative agent is Coxsackievirus A16.

- Transmitted via fecal-oral and respiratory routes, common in daycare settings
- Presents with vesicles on hands, feet, and oral ulcers
- Usually mild and self-limiting
- Can also be caused by Enterovirus 71 (more severe disease)
- Why not others:
 - Human herpesvirus 6 causes roseola (rash after fever)
 - Varicella-zoster virus causes generalized vesicular rash in different stages
 - Parvovirus B19 causes slapped cheek rash

QUESTION

A patient with borderline tuberculoid leprosy presents with clinical finding, as shown in the image. Which type of hypersensitivity reaction is involved in this condition?



A Type 1

B Type 2

C Type 3

D Type 4

CORRECT

RIGHT ANSWER

OK

D. Type 4

WHY THIS IS RIGHT

In Borderline tuberculoid leprosy, there is a strong cell-mediated immune response producing a Type IV hypersensitivity. This leads to granulomatous inflammation and destruction of peripheral nerves, resulting in palpable nerve thickening and sensory loss.

The nerve typically enlarged in lesions around the ear and neck region is the Greater auricular nerve.

Key points:

- Borderline tuberculoid leprosy shows strong cell-mediated immunity
- Type IV hypersensitivity causes nerve damage
- Nerve thickening is a cardinal sign
- Commonly involved nerves: greater auricular, ulnar, common peroneal

Thus, the correct concept is Type IV hypersensitivity with enlargement of the greater auricular nerve.

QUESTION

A 35-year-old patient presents with fever and malaise after returning from a recent forest trip. On examination, a black necrotic lesion is noted on the abdomen, as shown in the image. Which of the following is the drug of choice for this condition?



- A** Penicillin
- B** Doxycycline
- C** Ceftriaxone
- D** Artesunate

CORRECT

RIGHT ANSWER

B. Doxycycline

WHY THIS IS RIGHT

- The presence of a painless black necrotic eschar is highly characteristic of Scrub typhus.
- Caused by *Orientia tsutsugamushi*, transmitted by chigger (mite) bites
- Common in forested / rural areas (India = endemic)

Drug of Choice:

- Doxycycline -> first-line treatment
- Rapid clinical response is typical (fever subsides within 48 hrs)

Why not others:

- Penicillin -> ineffective (not active against intracellular organisms)
- Ceftriaxone -> not useful for rickettsial infections
- Artesunate -> used in malaria, not rickettsial diseases

QUESTION

A 6-year-old child presents with multiple small, skin-colored papules with central umbilication over the trunk and face. What is the most likely diagnosis?



A Verruca vulgaris

B Molluscum contagiosum virus

CORRECT

C Varicella

D Impetigo

RIGHT ANSWER

OK

B. Molluscum contagiosum virus

WHY THIS IS RIGHT

Multiple skin-colored papules with central umbilication in a child are characteristic of Molluscum contagiosum (Poxvirus infection).

- Etiology: Caused by Molluscum contagiosum virus (Poxvirus)
- Classic clinical features:

- o Small, pearly dome-shaped papules
- o Central umbilication (dimple) -> key diagnostic clue
- o Common on face, trunk, extremities in children
- Pathology: Henderson-Patterson bodies (intracytoplasmic inclusion bodies)
- Transmission:
 - o Direct skin-to-skin contact
 - o Autoinoculation (scratching)

Why not others:

- o Verruca vulgaris -> rough, hyperkeratotic warts (no umbilication)
- o Varicella -> vesicular lesions in different stages
- o Impetigo -> honey-colored crusted lesions

QUESTION

A patient presents with an BT leprosy lesion on the face as shown in the image below. Which of the following nerves is most commonly involved in this condition?



A Facial nerve

CORRECT

B Trigeminal nerve

C Abducens nerve

D Optic nerve

RIGHT ANSWER

OK **A. Facial nerve**

WHY THIS IS RIGHT

In facial lesions of borderline tuberculoid (BT) leprosy, the most commonly involved nerve is the facial nerve (especially its branches).

- o Leprosy affects cooler peripheral nerves
- o On the face -> facial nerve involvement is common
- o Weakness of facial muscles
- o Lagophthalmos (inability to close eye) -> risk of exposure keratitis
- o Loss of facial expression on affected side

Other commonly involved nerves in leprosy (general):

- o Ulnar nerve (most common overall)
- o Common peroneal nerve
- o Posterior tibial nerve
- o Greater auricular nerve

Why not others:

- o Trigeminal nerve -> sensory, less commonly emphasized vs facial motor deficits
- o Abducens & optic -> not involved in leprosy

QUESTION

The farmer presents with a cauliflower-like mass on the foot, which developed after a minor injury, as depicted in the image. Microscopic examination reveals the presence of copper penny bodies. Based on this information, what is the most probable diagnosis?



A Chromoblastomycosis

CORRECT

B Blastomycosis

C Sporotrichosis

D Phaeohyphomycosis

RIGHT ANSWER

OK

A. Chromoblastomycosis

WHY THIS IS RIGHT

Chromoblastomycosis is a chronic subcutaneous fungal infection characterized by “copper penny bodies” (sclerotic bodies) on microscopy.

- Etiology: Dematiaceous (pigmented) fungi e.g., *Fonsecaea*, *Cladosporium*
- Mode of infection: Traumatic implantation (e.g., thorn/prick injury in farmers)
- Clinical features:

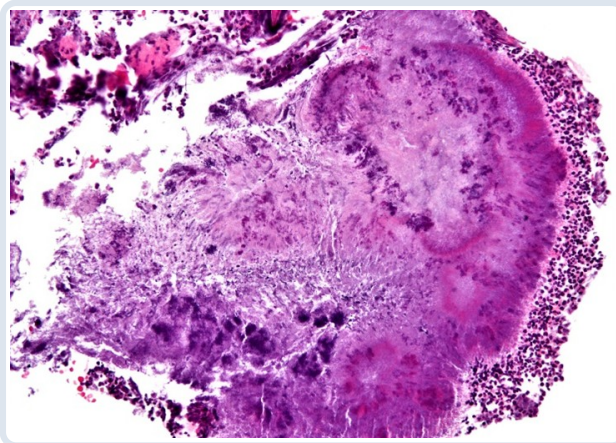
- o Slowly progressive verrucous / cauliflower-like lesion
- o Commonly affects feet and lower limbs
- Diagnostic hallmark (VERY HIGH-YIELD):

- o Copper penny bodies / Medlar bodies
- o Thick-walled, brown, round fungal cells
- Why not others:

- o Blastomycosis -> systemic fungal infection, not copper penny bodies
- o Sporotrichosis -> lymphatic spread (“rose gardener’s disease”)
- o Phaeohyphomycosis -> pigmented hyphae, no sclerotic bodies

QUESTION

A farmer visits you with a foot swelling and multiple discharging sinuses in the lower limb. Microscopic examination of granules from the discharge was performed and is as shown in the image below. Based on this information, what can be concluded about this condition?



A There is lymphocyte accumulation

B Both bacteria and fungi can be causative

CORRECT

C Undergoes lymphatic spread

D Involves only superficial tissues

RIGHT ANSWER

OK

B. Both bacteria and fungi can be causative

WHY THIS IS RIGHT

Chronic foot swelling with multiple discharging sinuses and granules = Mycetoma.

Mycetoma can be caused by both:

o Bacteria -> Actinomycetoma (e.g., Nocardia, Actinomyces)

o Fungi -> Eumycetoma (true fungi)

• Clinical triad:

1. Tumefaction (swelling)

2. Multiple sinus tracts

3. Granule discharge (colored grains)

• Important distinctions:

o Actinomycetoma: finer filaments, responds to antibiotics

o Eumycetoma: thicker hyphae, needs antifungals ± surgery

• Why other options are wrong:

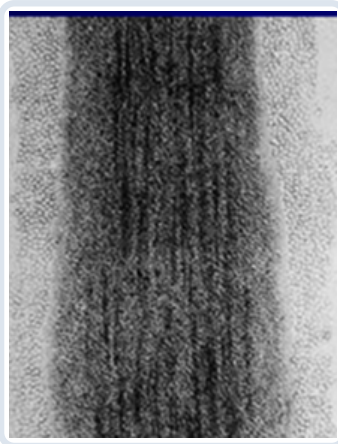
o Lymphocyte accumulation -> not defining feature

o Lymphatic spread -> seen in sporotrichosis, not mycetoma

Superficial only -> incorrect (can involve deep tissues & bone)

QUESTION

A hair shaft with arthroconidia is seen in the image below. Identify the fungi associated with it?



A Trichosporon

B Microsporum

CORRECT

C Candida

D Epidermophyton

RIGHT ANSWER

OK

B. Microsporum

WHY THIS IS RIGHT

Arthroconidia within/around the hair shaft indicate a dermatophyte infection of hair (tinea capitis).

- Causative organism: Microsporum species (classically shows ectothrix infection)
- Key feature:

o Arthroconidia (spores) coating the outside of hair shaft -> ectothrix pattern

Patterns of hair invasion:

- Ectothrix (outside hair): Microsporum
- Endothrix (inside hair): Trichophyton

Why not others:

- Trichosporon -> white piedra (nodules on hair)
- Candida -> yeast with pseudohyphae, not arthroconidia in hair
- Epidermophyton -> infects skin/nails, not hair

QUESTION

A 57-year-old person completed his treatment of leprosy. Two years later, he presents with a punched-out painless ulcer on his sole. What is the next best step in the management?



A Ask him to bear less weight on that leg and use plaster casts

CORRECT

B Restart MDT

C Aggressive Debridement with IV antibiotics

D Amputation

RIGHT ANSWER

OK

A. Ask him to bear less weight on that leg and use plaster casts

WHY THIS IS RIGHT

A painless, punched-out plantar ulcer in a treated leprosy patient is a trophic (neuropathic) ulcer due to loss of protective sensation.

- Pathogenesis:

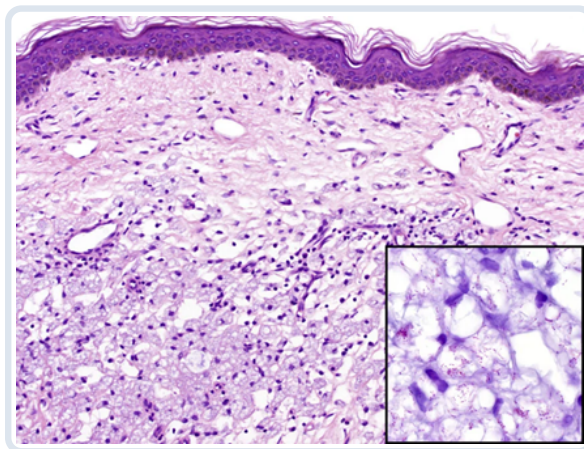
- o Peripheral nerve damage -> sensory loss
- o Repeated trauma/pressure -> ulcer formation
- Key management (most important):
 - o Offloading pressure -> rest, plaster cast / special footwear
 - o Prevent further trauma -> cornerstone of treatment

Why not others:

- Restart MDT -> not relapse (no active infection signs)
- Debridement/IV antibiotics -> only if secondary infection
- Amputation -> last resort

QUESTION

A patient presented with nodular lesions over the body, which are associated with slight anesthesia over the arm in the ulnar nerve distribution. Histopathology is as shown below. Which of the following options is true about this condition?



- A** Lepromatous leprosy with positive Lepromin test
- B** Tuberculoid leprosy with positive Lepromin test
- C** Lepromatous leprosy with negative Lepromin test
- D** ENL with negative Lepromin test

CORRECT

RIGHT ANSWER

- OK** **C. Lepromatous leprosy with negative Lepromin test**

WHY THIS IS RIGHT

Presence of multiple nodular lesions with sensory loss and histology showing Grenz zone + foamy macrophages (Virchow cells) filled with bacilli (globi) is diagnostic of lepromatous leprosy.

• Histopathological hallmarks:

- o Grenz zone (clear subepidermal zone)
- o Virchow cells (foamy macrophages) containing numerous *Mycobacterium leprae*
- o Globi (clusters of bacilli)

• Immunology:

- o Poor cell-mediated immunity (Th2 response)
- o Lepromin test -> negative

• Clinical features:

- o Multiple symmetric lesions
- o Diffuse involvement (skin + nerves)
- o Mild sensory loss (compared to tuberculoid)

Differentiation:

- Tuberculoid leprosy -> strong immunity, granulomas, lepromin positive
- ENL -> reactional state, not primary pathology

QUESTION

A farmer with a history of prick injury came with the complaint: swelling of the foot with sinus tracts showing pus discharge, which showed white granules and gram-positive filamentous structures were noted on microscopy. What is the most likely causative organism associated?

A Sporothrix schenckii

B Staphylococcus aureus

C **Nocardia brasiliensis**

CORRECT

D Aspergillus

RIGHT ANSWER

OK

C. Nocardia brasiliensis

WHY THIS IS RIGHT

A farmer with prick injury -> chronic swelling of foot + multiple sinus tracts + granular discharge ("grains") is typical of mycetoma (Madura foot).

- White granules + gram-positive filamentous bacteria -> Actinomycetoma
- Causative organism: Nocardia brasiliensis (aerobic, weakly acid-fast, gram-positive filamentous bacteria)

Types of mycetoma:

- Actinomycetoma (bacterial):

- o Nocardia, Actinomadura

- o White/yellow granules

- Eumycetoma (fungal):

- o Madurella mycetomatis

- o Black granules

Why not others:

- Sporothrix -> sporotrichosis (lymphocutaneous spread)
- Staphylococcus -> abscess, no granules
- Aspergillus -> not typical mycetoma cause here

QUESTION

An immunocompromised patient presents with the following lesion on the lateral aspect of the tongue as shown in the image below. This white membrane was not scrapeable with a gauze piece. What is the diagnosis?



A Oral hairy Leukoplakia

CORRECT

B Lichen planus

C Lichen Sclerosus

D Candidiasis

RIGHT ANSWER

OK

A. Oral hairy Leukoplakia

WHY THIS IS RIGHT

In an immunocompromised patient, a white, non-scrapable lesion on the lateral border of the tongue is characteristic of oral hairy leukoplakia.

- Etiology: Epstein-Barr virus (EBV) infection
- Common association: HIV/AIDS or other immunosuppressed states
- Location: Lateral margins of tongue (classic site)
- Appearance: White, corrugated ("hairy") plaque
- Key feature: Not scrapable

Differentiation:

- Candidiasis -> white plaques scrapable (leave erythematous base)
- Lichen planus -> Wickham striae (lace-like pattern)
- Lichen sclerosus -> genital involvement, not oral tongue

QUESTION

| Which of the following drugs in leprosy treatment cause hyperpigmentation?

A Dapsone

B Ofloxacin

C Rifampicin

D Clofazimine

CORRECT

RIGHT ANSWER

OK D. Clofazimine

WHY THIS IS RIGHT

Clofazimine, a key drug in multibacillary leprosy (MDT), characteristically causes skin hyperpigmentation.

- Type of pigmentation: Red brown to black discoloration
- Mechanism: Drug deposition in skin and macrophages
- Clinical relevance: May lead to cosmetic concern and poor compliance

Other drug effects (for contrast):

- Dapsone -> hemolysis (especially in G6PD deficiency), methemoglobinemia
- Rifampicin -> orange discoloration of body fluids
- Ofloxacin -> GI/CNS side effects (no pigmentation)

QUESTION

A 42-year-old male farmer from a rural hilly region of Himachal Pradesh presents with a slowly progressive swelling of the foot over 1 year. He reports walking barefoot regularly. Examination reveals a painless, firm swelling with multiple discharging sinuses exuding black granules. Which of the following is the most likely causative organism?

A *Madurella mycetomatis*

CORRECT

B *Cryptococcus neoformans*

C *Toxocara canis*

D *Coccidioides immitis*

RIGHT ANSWER

OK **A. *Madurella mycetomatis***

WHY THIS IS RIGHT

Walking barefoot in soil (e.g., gardeners, farmers) predisposes to traumatic implantation of fungi, leading to mycetoma (Madura foot).

- Causative organism: *Madurella mycetomatis* (fungal eumycetoma)
- Mode of infection: Entry through minor trauma (thorns, splinters)
- Clinical triad:
 - Tumefaction (swelling)
 - Multiple sinus tracts
 - Discharge with granules ("grains")

Why not others:

- Cryptococcosis -> inhalation (lungs/CNS), not via foot trauma
- *Toxocara canis* -> visceral/ocular larva migrans (ingestion of eggs)
- *Coccidioides immitis* -> inhalation causing pulmonary infection

QUESTION

| Nail lacquer used in treatment of Onychomycosis among the given options:

A Griseofulvin

B **Tavaborole**

CORRECT

C Caspofungin

D Itraconazole

RIGHT ANSWER

OK **B. Tavaborole**

WHY THIS IS RIGHT

Onychomycosis (fungal nail infection) can be treated with topical nail lacquers in mild or superficial disease.\

- Tavaborole -> a topical nail lacquer (oxaborole antifungal) that inhibits fungal protein synthesis
- Applied directly to the nail -> good for distal/subungual mild infections

Drug classification:

- Topical nail lacquer: Tavaborole
- Systemic therapy (moderate-severe cases): Itraconazole, Griseofulvin
- Not used for onychomycosis: Caspofungin (IV echinocandin for systemic fungal infections)

QUESTION

A 4-month-old infant is brought to the dermatology OPD with intense itching, especially at night. On examination, there are multiple excoriated papules and burrows seen over the palms, soles, and trunk. A clinical diagnosis of scabies is made. The pediatrician plans to initiate topical therapy. Which of the following drugs are appropriate and safe for use in infants with scabies?

1. Permethrin 5% cream
2. Benzyl benzoate 25% lotion
3. Crotamiton 10% cream
4. Ivermectin

A 1 and 2

B 1, 3 and 4

C 1 and 3

CORRECT

D 2 and 4

RIGHT ANSWER

OK C. 1 and 3

WHY THIS IS RIGHT

The source quiz contains the placeholder "\$19" here and does not include a written explanation for this item.

QUESTION

What is the probable diagnosis for a 38-year-old female who is experiencing substantial hair loss for 4 months and has a history of COVID-19 infection 8 months ago?



A Telogen effluvium

CORRECT

B Androgenetic alopecia

C Alopecia areata

D Anagen effluvium

RIGHT ANSWER

OK

A. Telogen effluvium

WHY THIS IS RIGHT

Key clinical clues:

- Diffuse hair loss (not patchy)
- Duration ~4 months
- History of stressor (COVID-19 infection 8 months ago)

Pathophysiology:

- Hair prematurely shifts from anagen → telogen phase
- Triggered by physiological stress (e.g., infections like COVID)
- Hair shedding typically begins 2-3 months after the trigger, but can persist

| Condition | Key Features | Why NOT here |

| ----- | ----- | ----- |

| Androgenetic alopecia | Gradual, patterned thinning (fronto-parietal/crown) | Chronic, not acute post-stress |

| Alopecia areata | Well-defined patchy hair loss | Not diffuse |

| Anagen effluvium | Rapid hair loss (days-weeks), usually chemotherapy | No chemo history |

QUESTION

A 4-year-old boy presents with multiple patches of hair loss which was associated with itching and scaling. His 2-year-old sister also had similar complaints. What is the most likely diagnosis?



A Tinea capitis

CORRECT

B Alopecia areata

C Seborrheic dermatitis

D Pediculosis capitis

RIGHT ANSWER

OK A. Tinea capitis

WHY THIS IS RIGHT

Tinea capitis is a dermatophyte infection of the scalp seen commonly in children, presenting with patchy hair loss + scaling + itching and often family spread.

- o Patchy alopecia with scaling
- o Broken hairs ("black dots")
- o Pruritus
- o Contagious (siblings often affected)
- Causative organisms:
 - o Trichophyton and Microsporum species
- Diagnosis:
 - o KOH mount -> fungal hyphae
 - o Wood's lamp (some species fluoresce)
- Treatment:
 - o Oral antifungals (Griseofulvin / Terbinafine) -> topical alone is insufficient

Differentiation:

- Alopecia areata -> smooth, non-scaly patches, no itching
- Seborrheic dermatitis -> diffuse greasy scales, no patchy hair loss
- Pediculosis capitis -> lice/nits, itching without scaling alopecia

QUESTION

A 27-year-old male came with complaints of asymptomatic generalized papulosquamous rash on trunk, moist flat grey perianal lesions and hair loss as given below. What is the most likely causative organism?



A Treponema pallidum

CORRECT

B Malassezia furfur

C Staphylococcus aureus

D Microsporum canis

RIGHT ANSWER

OK

A. Treponema pallidum

WHY THIS IS RIGHT

Secondary syphilis presents with generalized papulosquamous rash, condyloma lata (moist, flat perianal lesions), and patchy “moth-eaten” alopecia.

- Causative organism: Treponema pallidum
- Key features:

- o Non-pruritic rash (often involves palms and soles)
- o Condyloma lata in moist areas (highly infectious)
- o Patchy hair loss (“moth-eaten alopecia”)

Diagnostic tests:

- Screening -> VDRL / RPR
- Confirmatory -> FTA-ABS

Why not others:

- Malassezia furfur -> pityriasis versicolor (hypopigmented scaly patches)
- Staphylococcus aureus -> impetigo, folliculitis
- Microsporum canis -> tinea capitis (scaly alopecia, not systemic rash)

QUESTION

Identify the cause(s) that result in non-scarring alopecia from the following options.

1. Alopecia areata
2. Telogen effluvium
3. Androgenic alopecia
4. Frontal fibrosing alopecia

A 3 and 4

B 1, 2, and 3

CORRECT

C 2, 3, and 4

D Only 4

RIGHT ANSWER

OK

B. 1, 2, and 3

WHY THIS IS RIGHT

Non-scarring (non-cicatricial) alopecia is characterized by reversible hair loss with preservation of hair follicles, allowing potential regrowth.

Conditions causing non-scarring alopecia:

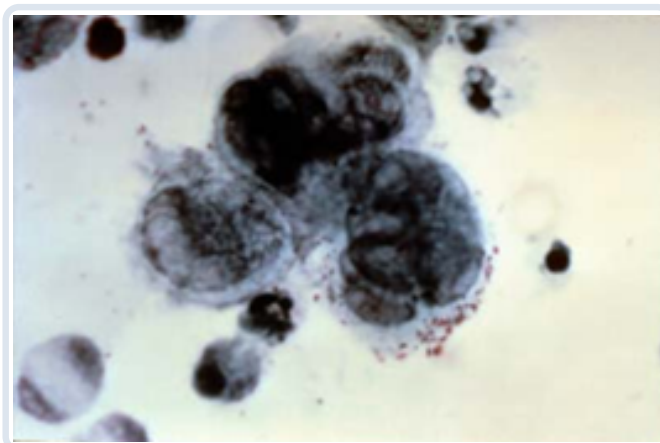
- Alopecia areata -> autoimmune; patchy hair loss with exclamation mark hairs
- Telogen effluvium -> diffuse shedding due to stress/illness; hair cycle shift
- Androgenetic alopecia -> patterned hair loss due to androgen sensitivity

Scarring alopecia (contrast):

- Frontal fibrosing alopecia -> permanent follicular destruction and fibrosis

QUESTION

A 28-year-old dentist presents with painful grouped vesicular lesions on the distal phalanx of her right index finger. She reports a burning sensation followed by the appearance of fluid-filled blisters that ruptured into shallow ulcers. She denies systemic symptoms. A Tzanck smear from the lesion reveals the following. Which of the following is the most likely causative agent?



A Cocksackievirus A16

B Herpes simplex virus

CORRECT

C Human papillomavirus

D Varicella-zoster virus

RIGHT ANSWER

OK B. Herpes simplex virus

WHY THIS IS RIGHT

Painful grouped vesicles on finger with multinucleated giant cells = Herpetic whitlow caused by Herpes simplex virus (HSV).

- o Healthcare workers (dentists, doctors)
- o Exposure to oral secretions -> HSV-1 commonly
- Clinical features:

- o Painful grouped vesicles on erythematous base
- o Burning/tingling before eruption
- o Vesicles -> rupture -> shallow ulcers
- Diagnostic clue: Tzanck smear -> multinucleated giant cells
- Why not others:

- o Cocksackie A16 -> hand-foot-mouth disease (oral + palm/sole lesions)
- o HPV -> warts (non-vesicular)
- o VZV -> dermatomal vesicles, more systemic

QUESTION

A young woman presents with complaints of a painless ulcer in the genital area. It is associated with non-tender inguinal lymphadenopathy. What is the most likely diagnosis?

A Chancroid

B Syphilis

CORRECT

C Herpes genitalis

D Granuloma inguinale

RIGHT ANSWER

OK

B. Syphilis

WHY THIS IS RIGHT

Painless genital ulcer with non-tender lymphadenopathy is classical for primary syphilis.

- Causative organism: *Treponema pallidum*
- Lesion: Chancre

- o Painless, indurated ulcer
- o Clean base with raised margins
- Lymph nodes:

Non-tender, firm, rubbery inguinal lymphadenopathy

Differentiation from other genital ulcers:

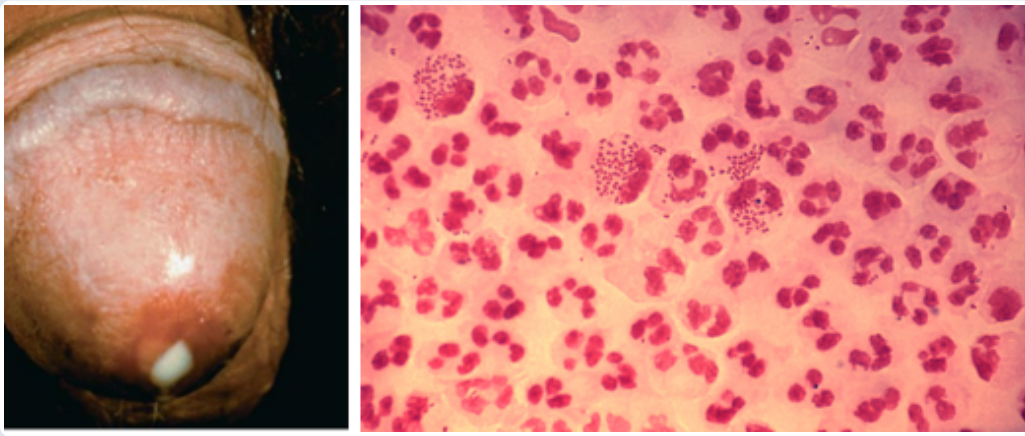
- Chancroid (*Haemophilus ducreyi*):
 - o Painful ulcer
 - o Tender, suppurative nodes (bubo)
- Herpes genitalis (HSV):
 - o Multiple painful vesicles/ulcers
 - o Burning sensation
- Granuloma inguinale (Donovanosis):
 - o Painless ulcer but beefy red, bleeds easily
 - o No lymphadenopathy (pseudo-bubo)

APPROACH TO GENITAL ULCERS

Painful	Painless
  HSV • Erosions • Erythematous base • Multinucleate giant cell • Acantholysis • IP: 2-5 days	  Syphilis • <i>T. pallidum</i> • LN - Painless (B/L) • Shotty • IP: 9-90 days
  Chancroid • <i>H. ducreyi</i> • LN- Painful (bubo) • IP: 2-5 days	  Donovanosis (Granuloma Inguinale) • <i>Klebsiella donovansii</i> • Red, Beefy ulcer • Pseudo-Bubo • IP: 8-80 days
	  LYG • <i>C. trachomatis</i> (L2 is mc) • Transient ulcer Frie test • <i>Mycoplasma genitalium</i> • Genital elephantiasis (Etiomene, Saxophone) • IP: 3-30 days

QUESTION

A male patient with a history of unprotected sexual intercourse four days back came with complaints of painful urethral discharge. What is the treatment of choice?



A Doxycycline 100 mg BD x 2 weeks

B Cefixime 800 mg stat

CORRECT

C Benzathine Penicillin

D Azithromycin 1 gm stat

RIGHT ANSWER

OK

B. Cefixime 800 mg stat

WHY THIS IS RIGHT

Painful purulent urethral discharge after unprotected sex with smear showing intracellular gram-negative diplococci indicates gonorrhea (*Neisseria gonorrhoeae*).

- Key diagnostic clue: GN diplococci inside neutrophils
- Clinical features: Dysuria + thick purulent discharge

Treatment of choice (uncomplicated gonorrhea):

- Oral Cefixime (single dose) (alternative to IM ceftriaxone when not feasible)

Important addition: Always cover Chlamydia -> add Azithromycin or Doxycycline

Why not others:

- Doxycycline alone -> Chlamydia, not gonorrhea
- Benzathine penicillin -> Syphilis
- Azithromycin alone -> not sufficient due to resistance

QUESTION

| Nugent score is for diagnosis of?

A Bacterial vaginosis

CORRECT

B Trichomoniasis

C Candidiasis

D Chlamydia

RIGHT ANSWER

OK

A. Bacterial vaginosis

WHY THIS IS RIGHT

Nugent score is a Gram stain-based scoring system used to diagnose bacterial vaginosis (BV).

- Principle: Evaluates vaginal flora by quantifying:

- o Lactobacilli (↓ in BV)
- o Gardnerella/Bacteroides (↑)
- o Mobiluncus (↑)
- Scoring (0-10):

- o 0-3: Normal flora
- o 4-6: Intermediate
- o 7-10: Bacterial vaginosis
- Clinical relevance:

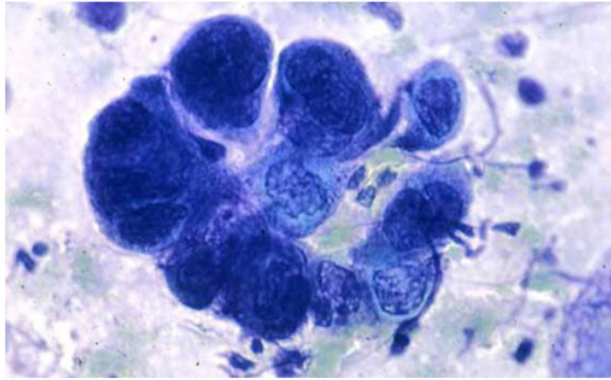
- o Objective alternative to Amsel criteria
- o Helps confirm polymicrobial dysbiosis

Why not others:

- Trichomoniasis -> wet mount (motile trophozoites)
- Candidiasis -> KOH mount (budding yeast, pseudohyphae)
- Chlamydia -> NAAT (PCR-based)

QUESTION

A 7-year-old boy is brought to the emergency department with multiple fluid-filled lesions around his lips that ruptured to form painful erosions. The child had a low-grade fever a day before the onset of skin findings. Examination reveals vesiculoulcerative lesions on the perioral skin and mucosa. A Tzanck smear prepared from the base of a is shown below. Which of the following is the most likely causative agent?



- A** Cytomegalovirus (CMV)
- B** Varicella zoster virus (VZV)
- C** Herpes simplex virus (HSV) CORRECT
- D** Human papillomavirus (HPV)

RIGHT ANSWER

- OK** **C. Herpes simplex virus (HSV)**

WHY THIS IS RIGHT

A child with painful perioral vesicles -> rupture -> erosions, preceded by fever, and Tzanck smear showing multinucleated giant cells with intranuclear inclusions is typical of Herpes simplex virus (HSV-1) infection (primary herpetic gingivostomatitis).

- Causative agent: HSV-1 (common in children; HSV-2 more genital)
- Lesion evolution: Vesicles -> rupture -> painful ulcers/erosions
- Lab clue:

- o Tzanck smear: multinucleated giant cells
- o Intranuclear inclusions (Cowdry type A)

Why not others:

- CMV -> "owl's eye" inclusions, systemic disease in immunocompromised
- VZV -> dermatomal (zoster) or generalized (chickenpox), not localized perioral clusters
- HPV -> warts, no vesicles or Tzanck findings

QUESTION

A patient came to OPD with complaints of pain in his genital area. On examination, there were painful coalescing vesicles, associated with painful inguinal lymphadenopathy. What is the diagnosis?

CORRECT

A

Herpes Simplex Virus-2 (HSV-2)

B

Molluscum contagiosum

C

Human papillomavirus

D

Varicella zoster virus

RIGHT ANSWER

OK

A. Herpes Simplex Virus-2 (HSV-2)

WHY THIS IS RIGHT

Painful, coalescing genital vesicles with tender inguinal lymphadenopathy are classic for genital herpes.

- Etiology: Herpes Simplex Virus type 2 (HSV-2) (most common)
- Lesion morphology:

- o Multiple painful vesicles -> rupture -> shallow ulcers
- o Often coalesce
- Associated feature: Tender inguinal lymphadenopathy

Key differentiations:

- Molluscum contagiosum -> painless, umbilicated papules
- HPV (genital warts) -> painless, cauliflower-like growths
- Varicella-zoster virus -> dermatomal distribution, not typically genital clustered vesicles

QUESTION

Mother had painful vesicular lesions over genitalia one year back. Baby is born with features of meningitis and fever and rashes in abdomen and forearm and died within a week. Scrapings from lesions showed multinucleate giant cells. What is the most likely organism?

A Herpes Simplex Virus type 2 (HSV2)

CORRECT

B Enterovirus 70

C Human Papillomavirus (HPV)

D Varicella-Zoster Virus

RIGHT ANSWER

OK

A. Herpes Simplex Virus type 2 (HSV2)

WHY THIS IS RIGHT

Neonatal infection with fever, meningitis, and vesicular skin lesions, along with Tzanck smear showing multinucleated giant cells, is characteristic of neonatal herpes.

- Causative organism: Herpes Simplex Virus type 2 (HSV-2)
- Source: Vertical transmission during vaginal delivery from a mother with genital herpes
- Clinical forms of neonatal HSV:

- o Skin, eye, mouth disease (SEM)
- o CNS disease (meningitis/encephalitis)
- o Disseminated disease (multi-organ, high mortality)
- Key diagnostic clue: Multinucleated giant cells on Tzanck smear

Why not others:

- Enterovirus 70 -> acute hemorrhagic conjunctivitis
- HPV -> warts, no neonatal CNS disease
- Varicella-zoster -> different presentation (no classic multinucleated giant cells in this context)

QUESTION

| Drug resistance is most seen with which STI?

A Chancroid

B Donovanosis

C Syphilis

D Gonorrhoea

CORRECT

RIGHT ANSWER

OK

D. Gonorrhoea

WHY THIS IS RIGHT

Gonorrhoea (*Neisseria gonorrhoeae*) is the STI most notorious for rapidly developing antimicrobial resistance.

- Mechanisms of resistance:

- o β -lactamase production (penicillin resistance)

- o Altered penicillin-binding proteins

- o Efflux pumps & porin mutations

- Drugs with rising resistance: Penicillin, tetracyclines, fluoroquinolones, even some cephalosporins

- Current treatment:

- o Ceftriaxone (last reliable first-line in many settings)

- o Often combined with anti-chlamydial therapy

Why not others:

- Syphilis (*Treponema pallidum*) -> still highly sensitive to penicillin

- Chancroid (*H. ducreyi*) -> some resistance but not as notorious

- Donovanosis -> relatively predictable response to antibiotics

QUESTION

A 23-year-old woman presents with malodorous discharge and positive whiff test. Which of the following is likely cause?

A Candidiasis

B Bacterial vaginosis

CORRECT

C Trichomoniasis

D Neisseria

RIGHT ANSWER

OK B. Bacterial vaginosis

WHY THIS IS RIGHT

Malodorous vaginal discharge with a positive whiff test (fishy odor on adding KOH) is characteristic of bacterial vaginosis (BV).

- Cause: Polymicrobial overgrowth, most commonly *Gardnerella vaginalis*
- Key diagnostic features (Amsel criteria):
- Thin, homogeneous discharge
- Positive whiff test (amine odor with KOH)
- Clue cells on microscopy
- Vaginal pH > 4.5

Why not others:

- Candidiasis -> thick curdy discharge, no fishy odor, pH normal
- Trichomoniasis -> frothy discharge, strawberry cervix, motile organisms
- Neisseria -> purulent discharge, no whiff test positivity

QUESTION

| in males, urethritis is caused by all except:

- A Neisseria
- B Mycoplasma
- C Trichomonas

D **Gardnerella**

CORRECT

RIGHT ANSWER

OK **D. Gardnerella**

WHY THIS IS RIGHT

Gardnerella vaginalis is not a causative organism of male urethritis.

	Gonococcal urethritis	Non gonococcal urethritis
Etiology:	Neisseria gonorrhea	Chlamydia trachomatis (D-K) Ureaplasma urealyticum Mycoplasma genitalium Trichomonas vaginalis (Q)
Incubation period:	2-5 days	7-14 days

QUESTION

A 28-year-old man came with complaints of pigmented lesions on palms and soles. He gave the history of sexual encounter followed by the development of transient genital lesion, 4 weeks ago. Which of the following investigation is most appropriate for this patient?



A KOH mount

B Tzanck smear

C Skin biopsy

D Serology

CORRECT

RIGHT ANSWER

OK D. Serology

WHY THIS IS RIGHT

Palmar and plantar pigmented maculopapular rash with history of a painless genital ulcer (chancre) indicates secondary syphilis caused by *Treponema pallidum*.

- Stage: Secondary syphilis (hematogenous spread)
- Key feature: Rash involving palms and soles
- Most appropriate investigation: Serology

- o Screening: VDRL / RPR
- o Confirmatory: FTA-ABS

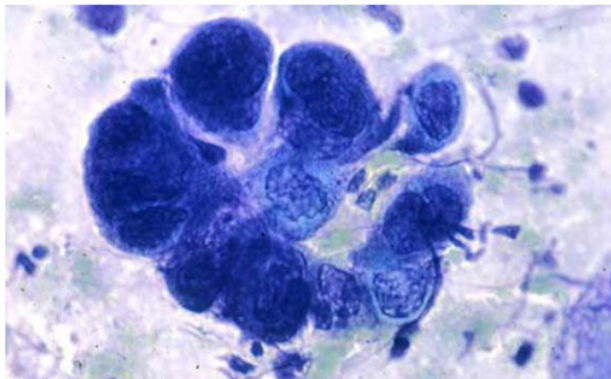
Why not other options:

- KOH mount -> Fungal infection
- Tzanck smear -> Herpes
- Skin biopsy -> Not first-line

Stage	Preferred Investigation	Rationale
Primary	Dark-field microscopy	Direct visualization of spirochetes
Secondary	Serology (VDRL/RPR)	High antibody <u>titers</u> , systemic infection
Tertiary	Serology + CSF analysis	Neurological involvement assessment

QUESTION

A young male presented with painful vesicular lesions over the genitalia with superficial erosion. Tzanck smear findings are as shown in the image. Which of the following is the drug of choice for this condition?



A Acyclovir

CORRECT

B Ceftriaxone

C Penicillin

D Prednisolone

RIGHT ANSWER

OK A. Acyclovir

WHY THIS IS RIGHT

Painful vesicular genital lesions with superficial erosions and a Tzanck smear showing multinucleated giant cells are characteristic of genital herpes (HSV infection).

- Etiology: Herpes simplex virus (usually HSV-2, sometimes HSV-1)
- Tzanck smear finding: Multinucleated giant cells with intranuclear inclusions
- Drug of choice: Acyclovir (inhibits viral DNA polymerase)

Key differentiation:

- Ceftriaxone -> Gonorrhea
- Penicillin -> Syphilis
- Prednisolone -> Not indicated (may worsen infection)

QUESTION

| On PS examination, this finding is seen. What is the diagnosis?



A Bacterial Vaginosis

B Trichomoniasis

CORRECT

C Candidiasis

D Cervical Carcinoma

RIGHT ANSWER

OK B. Trichomoniasis

WHY THIS IS RIGHT

Trichomoniasis (caused by *Trichomonas vaginalis*) presents with a characteristic “strawberry cervix” (punctate hemorrhages on cervix).

- Strawberry cervix on per speculum exam
- Frothy, greenish vaginal discharge
- Vaginal itching, irritation
- Pathophysiology: Protozoan infection -> inflammation -> punctate hemorrhages
- Diagnosis: Wet mount showing motile flagellated organisms
- Treatment: Metronidazole (treat both partners)

Why not other options:

A. Bacterial vaginosis

- Thin, fishy smelling discharge
- No cervical inflammation or strawberry appearance
- C. Candidiasis
- Curdy white discharge, intense itching
- No punctate hemorrhages

D. Cervical carcinoma

- Irregular, friable growth
- Not a diffuse strawberry pattern

QUESTION

Which of the following is not a syndrome management in males?

A Urethral discharge

B Genital discharge

C Inguinal swelling

D Lower abdominal pain

CORRECT

RIGHT ANSWER

OK

D. Lower abdominal pain

WHY THIS IS RIGHT

Syndromic management of STIs is gender-specific. In males, the standard syndromes include:

- Urethral discharge
- Genital ulcer disease
- Inguinal bubo (swelling)

Lower abdominal pain is a syndrome of females, representing pelvic inflammatory disease (PID).



QUESTION

Identify the condition shown in the image and select the most appropriate treatment.



A Staphylococcal scalded syndrome-injection cephalalexin

CORRECT

B Epidermolysis bullosa- bandaging

C Bullous impetigo-antibiotics

D Erythema multiforme-antivirals

RIGHT ANSWER

OK

A. Staphylococcal scalded syndrome-injection cephalalexin

WHY THIS IS RIGHT

Staphylococcal Scalded Skin Syndrome (SSSS) is a toxin-mediated condition caused by *Staphylococcus aureus*, characterized by widespread superficial blistering and skin peeling in neonates/infants.

- o Exfoliative toxins (A & B) -> cleavage at stratum granulosum (desmoglein-1)

- o Leads to superficial epidermal splitting

- Clinical features:

- o Diffuse erythema -> flaccid bullae -> skin desquamation (scalded appearance)

- o Positive Nikolsky sign

- o Perioral crusting, irritability

- o No mucosal involvement (unlike SJS/TEN)

- Treatment:

- o IV anti-staphylococcal antibiotics (e.g., cephalosporins like cephalalexin/cefazolin)

- o Supportive care (fluids, skin care)

Why not others:

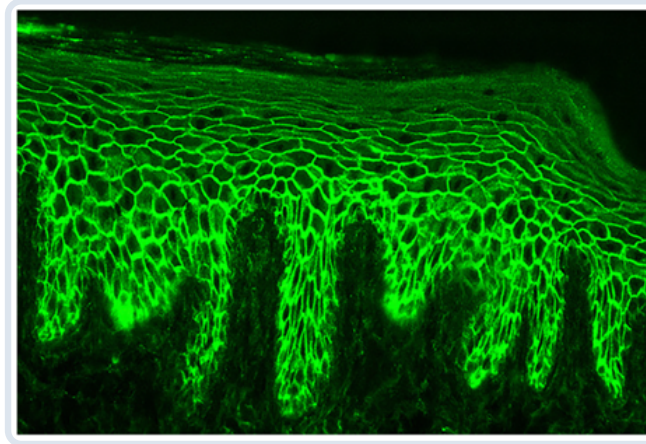
- o Epidermolysis bullosa -> genetic, chronic condition

- o Bullous impetigo -> localized lesions

- o Erythema multiforme -> target lesions, mucosal involvement

QUESTION

A patient came with complaints of vesicular oral lesions, and on skin sample, DIF as given below. What is the most likely diagnosis?



A Pemphigus vulgaris

CORRECT

B Bullous pemphigoid

C LIGA

D Dermatitis herpetiformis

RIGHT ANSWER

OK A. Pemphigus vulgaris

WHY THIS IS RIGHT

Pemphigus vulgaris is characterized by painful mucosal (oral) vesicles/erosions with intraepidermal blistering and a classic "fishnet (chicken wire)" pattern on direct immunofluorescence (DIF).

- Pathophysiology:

- o Autoantibodies (IgG) against desmoglein 3 ($\pm$ desmoglein 1)

- o Causes loss of cell adhesion (acantholysis)

- DIF finding (hallmark):

- o Intercellular IgG deposition $\rightarrow$ fishnet/chicken wire pattern

- Clinical features:

- o Oral lesions precede skin lesions

- o Flaccid bullae $\rightarrow$ rupture $\rightarrow$ painful erosions

- o Positive Nikolsky sign

Differentiation:

- Bullous pemphigoid $\rightarrow$ subepidermal, linear IgG at BMZ

- Dermatitis herpetiformis $\rightarrow$ granular IgA at dermal papillae

- Linear IgA disease $\rightarrow$ linear IgA deposition

QUESTION

A young male came with GI complaints like malabsorption, diarrhea. Cutaneous examination noted itchy lesions on the skin with blistering. On histopathology, cryptitis and flattened villi were noted. His condition improved with a gluten-free diet. What is the specific antibody in this condition? (NEET PG 2024)

A Tissue Transglutaminase 3 (ttg-3)

CORRECT

B Anti-nuclear antibodies

C Rheumatoid factor

D P-ANCA

RIGHT ANSWER

OK

A. Tissue Transglutaminase 3 (ttg-3)

WHY THIS IS RIGHT

A patient with malabsorption, diarrhea, and itchy blistering skin lesions that improve with a gluten-free diet has dermatitis herpetiformis associated with celiac disease.

- Skin disease: Dermatitis herpetiformis
- Gut pathology: Villous atrophy + crypt hyperplasia (celiac disease)
- Key antibody in skin: IgA against tissue transglutaminase-3 (tTG-3)

Pathophysiology:

- Gluten -> immune response -> IgA antibodies
- These deposit in dermal papillae -> cause pruritic vesicles

Related antibodies:

- tTG-2 (tissue transglutaminase-2) -> intestinal celiac disease
- tTG-3 -> skin involvement (dermatitis herpetiformis)

QUESTION

A 34-year-old woman presents with an intensely pruritic papulovesicular rash on her elbows and buttocks. She was recently diagnosed with gluten-sensitive enteropathy (celiac disease). Examination reveals grouped erythematous papulovesicular lesions. A skin biopsy with direct immunofluorescence from perilesional skin shows granular IgA deposition at the dermal papillae. Which of the following is the most likely diagnosis?



A Pemphigus vulgaris

B Bullous pemphigoid

C Psoriasis

D Dermatitis herpetiformis

CORRECT

RIGHT ANSWER

OK

D. Dermatitis herpetiformis

WHY THIS IS RIGHT

Dermatitis herpetiformis is a chronic, intensely pruritic papulovesicular disorder strongly associated with celiac disease (gluten sensitivity).

• Clinical features:

- o Grouped vesicles ("herpetiform")
- o Severe itching
- o Symmetrical distribution on extensor surfaces (elbows, knees, buttocks)
- Pathology (hallmark):

- o Granular IgA deposition at dermal papillae on direct immunofluorescence

• Pathogenesis:

- o IgA antibodies against tissue transglutaminase cross-react with skin

• Management:

- o Gluten-free diet (definitive)
- o Dapsone for rapid symptom relief

Differentiation:

- Pemphigus vulgaris -> intraepidermal flaccid bullae, IgG
- Bullous pemphigoid -> subepidermal tense bullae, linear IgG
- Psoriasis -> plaques with silvery scales

QUESTION

A female presented in dermatology OPD with acne that is not resolving on oral isotretinoin and antibiotics therapy. Which of the following is the next best step among the following options?

- A Look for dietary triggers
- B Evaluate for hyperandrogenism**
- C Check for antibiotic resistance
- D Look for drug triggers

CORRECT

RIGHT ANSWER

- B. Evaluate for hyperandrogenism**

WHY THIS IS RIGHT

Refractory acne in females (not responding to isotretinoin + antibiotics) -> always evaluate for underlying hyperandrogenism.

- o Persistent, severe, or treatment-resistant acne often indicates hormonal etiology
 - o Common causes:
 - § PCOS (most common)
 - § Congenital adrenal hyperplasia
 - § Androgen-secreting tumors (rare)
 - Clinical clues suggesting hyperandrogenism:
 - o Irregular menstrual cycles
 - o Hirsutism
 - o Androgenic alopecia
 - o Sudden onset or severe acne
 - Next steps in evaluation:
 - o Serum testosterone
 - o DHEAS
 - o LH/FSH ratio (PCOS)
 - Management implication: Add hormonal therapy (OCPs, spironolactone) rather than escalating antibiotics/isotretinoin
- Why not others:
- Dietary triggers -> mild/moderate acne, not resistant severe acne
 - Antibiotic resistance -> already on isotretinoin (not primarily antibiotic-dependent)
 - Drug triggers -> consider, but less likely in classic persistent female acne

QUESTION

After using a hair dye a lady developed a skin reaction as shown in the image. Which of the following chemicals among given options is responsible for this condition?



A Pollen

B Chromates

C Balsam of Peru

D Para-Phenylenediamine

CORRECT

RIGHT ANSWER

OK

D. Para-Phenylenediamine

WHY THIS IS RIGHT

Allergic contact dermatitis following hair dye use is most commonly caused by para-phenylenediamine (PPD).

- Mechanism: Type IV (delayed) hypersensitivity reaction
- Typical presentation:

- o Pruritic, erythematous, edematous rash
- o Involves scalp margins, forehead, ears, and neck (sites of dye contact/spread)
- PPD is a potent sensitizer used in permanent hair dyes
- Also cross-reacts with:

- o Azo dyes
- o Local anesthetics (benzocaine)
- o Sulfonamides

Why not others:

- Pollen -> Type I hypersensitivity (allergic rhinitis, not contact dermatitis)
- Chromates -> Cement/contact dermatitis (construction workers)
- Balsam of Peru -> Fragrance allergy

QUESTION

An adolescent male came with complaints of lesions all over the face and back, which were predominantly comedones. What is the most effective treatment for this condition?



A Systemic doxycycline

CORRECT

B Systemic isotretinoin

C Topical Dapsone

D Systemic Azithromycin

RIGHT ANSWER

OK

A. Systemic doxycycline

WHY THIS IS RIGHT

An adolescent with multiple comedones (open/closed) on face and back has acne vulgaris (comedonal/papulopustular type).

- Pathogenesis (4 key factors):

- o ↑ Sebum production
- o Follicular hyperkeratinization → comedone formation
- o Cutibacterium acnes proliferation
- o Inflammation
- Most effective treatment: Systemic doxycycline → for moderate inflammatory acne

Therapy approach:

- Mild (comedonal) → topical retinoids ± benzoyl peroxide
- Moderate (papulopustular) → oral antibiotics (doxycycline)
- Severe/nodulocystic → oral isotretinoin (definitive)

Why not others:

- Isotretinoin → reserved for severe/refractory cases
- Topical dapsone → mild/moderate inflammatory acne
- Azithromycin → alternative, not first-line

QUESTION

A patient presents with annular lesions on the skin. Which of the following conditions is least likely to present with annular lesions?

A Tinea corporis

B Porokeratosis

C Pityriasis rosea

D Urticaria

CORRECT

RIGHT ANSWER

OK D. Urticaria

WHY THIS IS RIGHT

Annular (ring-shaped) lesions are classically seen in several dermatological conditions due to central clearing with peripheral activity.

Common causes of annular lesions:

- Tinea corporis -> ringworm with central clearing and active scaly margin
- Porokeratosis -> annular plaques with keratotic ridge (cornoid lamella)
- Pityriasis rosea -> annular/oval lesions with collarette scaling

Least likely:

- Urticaria -> transient wheals, not true annular lesions; lesions are fleeting and change within hours

QUESTION

A 24-year-old patient presents with a well-defined, round, violaceous patch on the thigh. The lesion healed with hyperpigmentation previously and has reappeared at the exact same site after taking an analgesic tablet for a headache. What is the most likely diagnosis?



A Cutaneous mastocytosis

B Fixed drug eruption

CORRECT

C Herpes simplex infection

D Erythema multiforme

RIGHT ANSWER

OK B. Fixed drug eruption

WHY THIS IS RIGHT

A fixed drug eruption (FDE) is a drug-induced hypersensitivity reaction characterized by:

- Reappearance of lesions at the exact same site upon re-exposure to the offending drug (hallmark feature)
- Well-defined, round/oval violaceous or erythematous patches/plaques
- Healing with residual hyperpigmentation

Common triggers: Analgesics (NSAIDs), antibiotics (sulfonamides, tetracyclines), antiepileptics

Why not other options:

- Cutaneous mastocytosis: Multiple lesions, Darier sign positive, no drug relation
- Herpes simplex: Painful grouped vesicles, not a fixed violaceous patch, no drug trigger
- Erythema multiforme: Multiple target lesions, symmetrical, not at same exact site

QUESTION

A young patient presents with multiple dark brown to black macules on the lips and buccal mucosa. Colonoscopy reveals multiple hamartomatous polyps. What is the most likely diagnosis?

A Peutz-Jeghers syndrome

CORRECT

B Familial adenomatous polyposis (FAP)

C Gardner syndrome

D Cronkhite-Canada syndrome

RIGHT ANSWER

OK

A. Peutz-Jeghers syndrome

WHY THIS IS RIGHT

Presence of multiple dark brown to black macules on the lips and buccal mucosa with hamartomatous intestinal polyps is characteristic of Peutz-Jeghers syndrome.

It is caused by mutation in the STK11 gene.

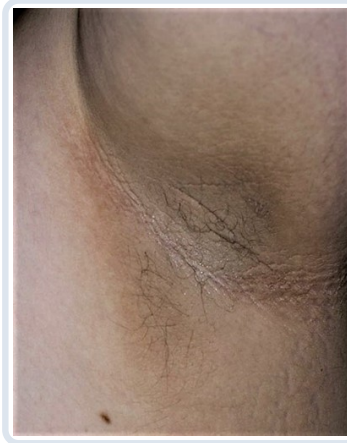
- Mucocutaneous pigmentation (lips, buccal mucosa, fingers) is an early clue
- Polyps are hamartomatous, commonly in small intestine
- Increased risk of multiple malignancies (GI, pancreas, breast, ovary)
- Inheritance is autosomal dominant

Why not others:

- Familial adenomatous polyposis has adenomatous polyps without pigmentation
- Gardner syndrome has osteomas, fibromas, and dental abnormalities
- Cronkhite-Canada syndrome is non-hereditary with alopecia, nail atrophy, and diarrhea

QUESTION

A female patient with a BMI of 35 kg/m² presents to you with a skin lesion in the axilla as shown below. Which of the following condition is she most likely to be suffering from?



A Hypothyroidism

B Metabolic syndrome

CORRECT

C Addison's disease

D Hyperparathyroidism

RIGHT ANSWER

OK

B. Metabolic syndrome

WHY THIS IS RIGHT

Acanthosis nigricans (velvety hyperpigmented plaques in axilla) is a marker of insulin resistance and is strongly associated with metabolic syndrome.

- o Hyperpigmented, velvety thickened skin
- o Common sites: axilla, neck, groin
- o Hyperinsulinemia -> stimulates keratinocyte & dermal fibroblast proliferation
- Associated conditions:

- o Metabolic syndrome (most common)
- o Obesity
- o Type 2 diabetes mellitus
- o PCOS

Why not others:

- o Hypothyroidism -> dry skin, not velvety hyperpigmentation
- o Addison's disease -> generalized pigmentation (not velvety plaques)
- o Hyperparathyroidism -> no such skin findings

QUESTION

A 20-year-old man presents with a stable hypopigmented patch on his trunk that has been present since birth. He reports no change in size or color of the lesion over time. On examination, the lesion is hypopigmented but not depigmented, and Wood's lamp examination reveals a dull white accentuation. Diascopy is Inconclusive / negative (no blanching). There is no sensory loss or scaling. Which of the following is the most likely diagnosis?



A Indeterminate leprosy

B **Nevus depigmentosus**

CORRECT

C Nevus anemicus

D Vitiligo

RIGHT ANSWER

OK **B. Nevus depigmentosus**

WHY THIS IS RIGHT

A congenital, stable hypopigmented patch that does not change over time, with dull accentuation on Wood's lamp and no sensory loss or scaling, is characteristic of nevus depigmentosus.

• Key features:

- o Present since birth
- o Non-progressive (stable size and color)
- o Hypopigmented (not depigmented)
- o Wood's lamp -> dull white (not chalky bright)

Differentiation:

- Vitiligo -> acquired, progressive, depigmented, bright white on Wood's lamp
- Indeterminate leprosy -> sensory loss ± hypopigmented patch
- Nevus anemicus -> vascular anomaly, blanches on diascopy

QUESTION

An overweight 13-year-old girl has the following blackish discoloration on her neck, as shown in the image below. What is this condition and its association?



CORRECT

- A** Acanthosis nigricans - Insulin resistance
- B** Stria albicans - Cushing syndrome
- C** Xeroderma pigmentosum - Freckles
- D** Café au lait spots - McCune Albright syndrome

RIGHT ANSWER

- OK** **A. Acanthosis nigricans - Insulin resistance**

WHY THIS IS RIGHT

Acanthosis nigricans presents as hyperpigmented, velvety thickening of skin, commonly seen on the neck and flexural areas, especially in overweight/obese individuals.

- Key association: Insulin resistance (seen in obesity, type 2 diabetes, PCOS)
- Pathophysiology: Hyperinsulinemia -> stimulates keratinocyte & dermal proliferation

Clinical importance:

- Acts as a cutaneous marker of metabolic syndrome
- In rare cases (sudden onset, extensive) -> may indicate internal malignancy (paraneoplastic)

Differentiation:

- Striae (Cushing) -> linear stretch marks
- Xeroderma pigmentosum -> photosensitivity + freckles
- Café-au-lait spots -> smooth bordered pigmented macules

QUESTION

Which form of vitiligo is initially progressive and later becomes stable and non-progressive?

A Mixed

B Segmental

CORRECT

C Acrofacial

D Focal

RIGHT ANSWER

OK

B. Segmental

WHY THIS IS RIGHT

Segmental vitiligo is characterized by an initial rapid progression followed by long-term stability.

- Pattern: Unilateral, dermatomal/segmental distribution
- Course:

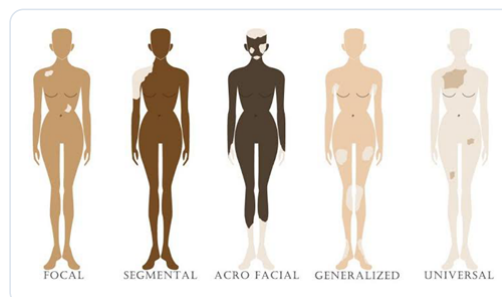
o Early phase -> rapid spread

o Later -> stabilizes and becomes non-progressive

- Onset: Usually earlier age than other types
- Response to therapy: Often less responsive to medical therapy, better suited for surgical treatments (grafting) once stable

Contrast with other types:

- Non-segmental vitiligo (acrofacial, generalized, mixed) -> chronic, relapsing, unpredictable course
- Focal vitiligo -> localized but may progress or evolve



QUESTION

Patient presents with ulcerative lesion near nose/medial canthus. What is the probable diagnosis?



A Lentigo maligna melanoma

B Basal cell carcinoma

CORRECT

C Squamous cell carcinoma

D Nevus

RIGHT ANSWER

OK

B. Basal cell carcinoma

WHY THIS IS RIGHT

- Basal cell carcinoma commonly occurs on sunexposed facial areas
- It is slow-growing, locally invasive
- Presents as: Ulcer with raised, rolled edges , +/- central ulceration ("rodent ulcer")

❑ Option A: Lentigo maligna melanoma
Typically a *Flat, pigmented lesion,* not ulcerative.

❑ Option C: Squamous cell carcinoma
Ulcerative, but: more indurated, irregular edges; Less common at medial canthus compared to BCC

❑ Option D: Nevus : It is a Benign mole , does not present as an ulcerative lesion.

QUESTION

Which of the following descriptions best characterizes the oral lesions seen in Kaposi sarcoma?

- A White, flat patches
- B Ulcerative painful lesions
- C Red, smooth, non-elevated macules

D Purple-red, elevated lesions

CORRECT

RIGHT ANSWER

D. Purple-red, elevated lesions

WHY THIS IS RIGHT

Oral lesions in Kaposi sarcoma are classically purple-red, elevated vascular lesions.

- o Caused by Human herpesvirus-8 (HHV-8)
- o Strongly associated with HIV/AIDS
- Oral lesion characteristics:
 - o Purple / violaceous (red-blue) color
 - o Elevated plaques or nodules
 - o Commonly involve hard palate, gingiva, tongue
- Pathology:
 - o Vascular tumor -> proliferation of spindle cells and blood vessels
 - o Extravasated RBCs -> characteristic color

Why not others:

- o White flat patches -> leukoplakia
- o Ulcerative painful lesions -> aphthous ulcers, malignancy
- o Red non-elevated macules -> erythema, not vascular tumor

QUESTION

A patient is diagnosed with multiple anogenital warts, and the biopsy reveals squamous atypia. Among the various human papillomavirus types, which ones are classified as high-risk?

A HPV 2

B HPV 18

CORRECT

C HPV 6

D HPV 11

RIGHT ANSWER

OK

B. HPV 18

WHY THIS IS RIGHT

High-risk Human Papillomavirus (HPV) types are oncogenic and associated with dysplasia and malignancy (especially cervical and anogenital cancers).

- High-risk HPV types (must remember):

- o HPV 16, 18 (most important)

- o Also: 31, 33, 45

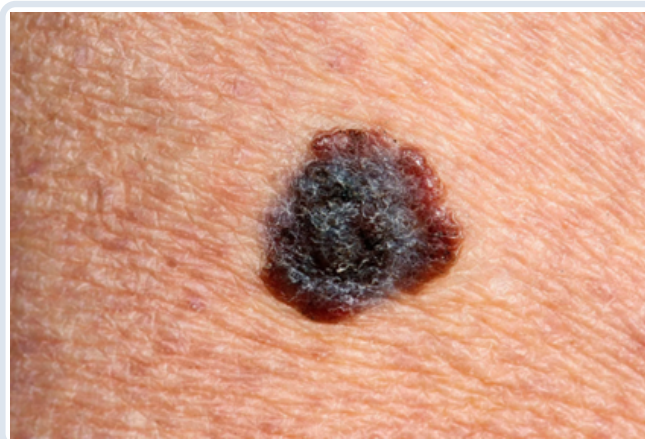
- Low-risk HPV types:

- o HPV 6, 11 -> cause anogenital warts (condyloma acuminata)

- o HPV 2 -> causes cutaneous warts

QUESTION

| Which of the following is associated with the clinical condition shown in the image?



A

Cataract

B

Glaucoma

C

Malignant Melanoma

CORRECT

D

Basal cell carcinoma

RIGHT ANSWER

OK

C. Malignant Melanoma

WHY THIS IS RIGHT

Irregular, asymmetrical, darkly pigmented lesion -> think malignant melanoma.

- o Variegated pigmentation (black/brown)
- o Irregular borders
- o Large, expanding lesion on sun-exposed area
- o Highly aggressive tumor of melanocytes
- o Early metastasis via lymphatics and blood
- ABCDE criteria (must know):

- o A - Asymmetry
- o B - Border irregularity
- o C - Color variation
- o D - Diameter > 6 mm
- o E - Evolution (change over time)

Why not others:

- Cataract -> lens opacity, no skin lesion
- Glaucoma -> optic neuropathy
- Basal cell carcinoma -> pearly papule with telangiectasia, not heavily pigmented like this

QUESTION

A 10-year-old child is brought in with complaints of freckling over sun-exposed areas and increased sensitivity to sunlight. On examination, there are multiple freckles on the face and arms, and two lesions on the nose and cheek that are biopsied and confirmed as basal cell carcinomas. There is no history of immunodeficiency or family history of skin cancer. Which of the following DNA repair pathways is most likely defective in this patient?



- A DNA mismatch repair
- B Base excision repair
- C DNA double-strand break repair

D Nucleotide excision repair

CORRECT

RIGHT ANSWER

OK

D. Nucleotide excision repair

WHY THIS IS RIGHT

A child with photosensitivity, freckling in sun-exposed areas, and early skin cancers (BCC) is characteristic of xeroderma pigmentosum (XP).

- Underlying defect:

- o Nucleotide excision repair (NER) pathway defect

- o Inability to repair UV-induced thymine dimers

- Clinical features:

- o Extreme photosensitivity

- o Early freckling and pigmentation

- o Early-onset skin malignancies (BCC, SCC, melanoma)

- Pathophysiology:

UV damage accumulates -> DNA mutations -> malignancy

Why not others:

- Mismatch repair -> Lynch syndrome

- Base excision repair -> small base damage

- Double-strand break repair -> BRCA-related cancers

QUESTION

A middle aged Indian male came to Derma OPD with the lesion as shown in the image below. What is the most likely diagnosis?



A Squamous cell carcinoma

B Basal cell carcinoma

CORRECT

C Melanoma

D Discoid lupus erythematosus

RIGHT ANSWER

OK

B. Basal cell carcinoma

WHY THIS IS RIGHT

A pearly papule with central ulceration and rolled borders, especially on a sun-exposed area of the face, is characteristic of basal cell carcinoma (BCC).

• Typical features:

- o Pearly/translucent nodule
- o Rolled (raised) edges
- o Central ulcer ("rodent ulcer")
- o Surface telangiectasia

• Risk factors:

- o Chronic UV exposure
- o Fair skin, increasing age

• Behavior:

- o Locally invasive, very slow growing
- o Rarely metastasizes

Differentials:

- Squamous cell carcinoma -> ulcer with everted edges, more aggressive
- Melanoma -> pigmented lesion with ABCDE changes
- Discoid lupus -> erythematous plaques with scarring, no pearly borders

QUESTION

| What is the most common site of melanoma in Indians?

A Trunk

B Hands and feet

CORRECT

C Genitals

D Face

RIGHT ANSWER

OK B. Hands and feet

WHY THIS IS RIGHT

In Indians and other darker-skinned populations, the most common type of melanoma is acral lentiginous melanoma, which predominantly occurs on palms, soles, and nail beds (hands and feet).

Key points:

- Unlike Caucasians (where trunk is common), melanoma in Indians is more frequent on acral sites
- Often not related to sun exposure
- Commonly presents late -> poorer prognosis