

A close-up photograph of a doctor's hand holding a stethoscope over an elderly patient's hand. The doctor's hand is on the left, wearing a white sleeve, and the stethoscope is positioned over the patient's hand. The patient's hand is on the right, showing signs of aging. The background is a soft, out-of-focus light color.

# Geriatric Dermatology: Common Skin Complaints in Older Adults

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# Roadmap

Changes in Aging Skin

1

Pruritus

3

Nail Disorders

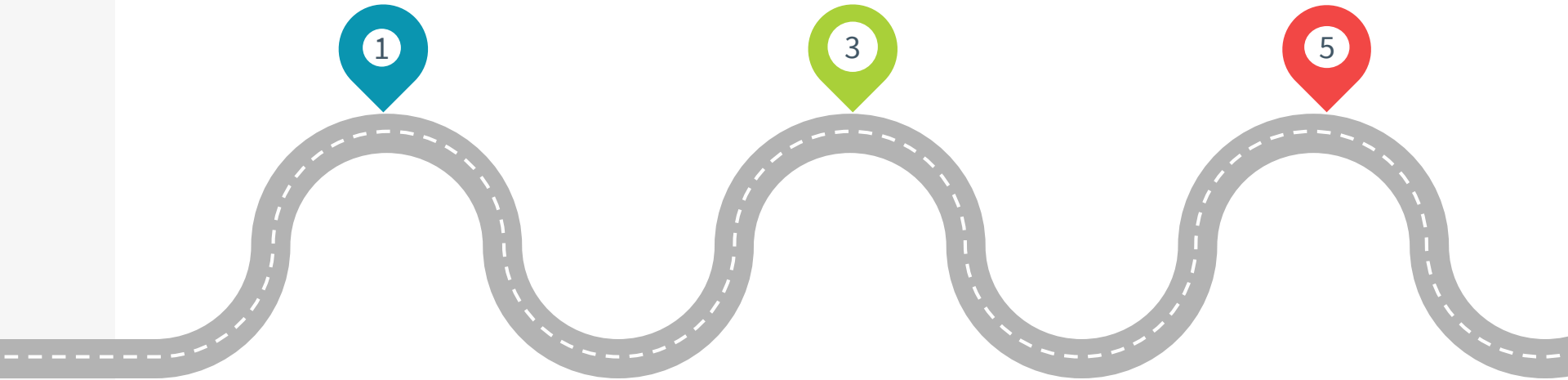
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Common Skin Dx

4

Bruising



1.

# Changes in Aging Skin

# Intrinsic vs. Extrinsic Changes

## INTRINSIC

- ▶ Due to skin's natural metabolic aging process
- ▶ Causes chronologic skin aging

## EXTRINSIC

- ▶ Due to external factors (eg, exposure to UV light, smoking, pollutants)
- ▶ Cause photoaging

<b>Physiological Changes</b>	<b>Cutaneous Effects</b>
Decrease in skin lipids & barrier fxn	Dryness
Decreased cell replacements	Roughness, delayed healing, uneven pigmentation
Decreased DNA repair	Increased malignancies
Fragmentation of collagen & elastic fibers	Wrinkles, lax skin, increased risk of pressure ulcers
Reduced support of blood vessels	Purpuric lesions
Decreased sensory perceptions	Increased tendencies to injuries
Reduced hair growth & effects of androgen	Male / female patterns of alopecia, bushier eyebrows, growth of hair in external auditory meatus in males
Reduced function of sweat glands	Risk of overheating and heat strokes
Reduced nail growth	Decreased linear growth, onychogryphosis, longitudinal striations, dull and brittle nails
Decrease in melanocytes	Gray hair, increased susceptibility to solar radiation

2.

# Common Skin Diagnoses

# Common Skin Diagnoses

1. **Xerosis\***
2. **Pruritus\***
3. Benign lesions & tumors
4. Actinic keratoses
5. Malignant tumors
6. **Purpura\***
7. Alopecia
8. **Nail disease\***
9. Eczema
10. Rosacea

3.

Pruritus



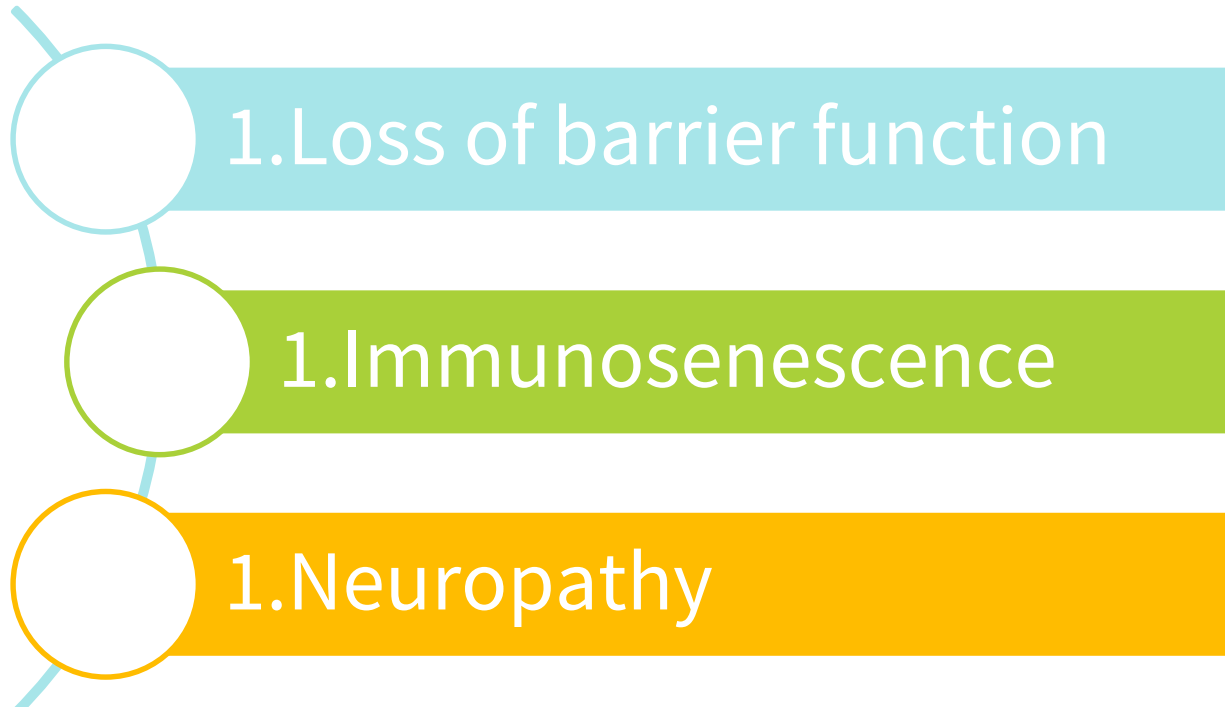


# Pruritus

- ▶ Most common skin complaint in the elderly
  - ▶ Prevalence estimated to be 29%
- ▶ Chronic if > 6 weeks
- ▶ Can worsen quality of life due to irritation and sleep impairment

# Aging and Itching

- ▶ 3 age-related biological processes contribute to itching



# Ddx of Chronic Pruritus

## DERMATOLOGIC

- ▶ Xerosis\*
- ▶ Seborrheic dermatitis
- ▶ Contact dermatitis
- ▶ Urticaria
- ▶ Psoriasis
- ▶ Nummular eczema
- ▶ Scabies

## NON-DERMATOLOGIC

- ▶ **Systemic**
  - ▶ CKD
  - ▶ Cholestatic liver disease
  - ▶ Hematologic
  - ▶ Malignancy
  - ▶ Meds
- ▶ **Neuropathic**
  - ▶ Brachioradial pruritus
  - ▶ Notalgia paresthetica
  - ▶ DM
- ▶ **Psychogenic**
  - ▶ OCD
  - ▶ Depression
  - ▶ Schizophrenia

# Xerosis

- ▶ Most common dermatologic cause of pruritus in the elderly
- ▶ Characterized by dry, scaly skin (usually in lower extremities)



# Xerosis Management

- ▶ Keep showers short (< 10 mins)
- ▶ Use warm (not hot) water
- ▶ Gently towel dry the skin
- ▶ Moisturize immediately after bathing
- ▶ Use cream or ointments (not lotions)
- ▶ Use fragrance-free products





# Evaluation of Non-Dermatologic Causes

- ▶ HPI – unifocal vs. generalized / multifocal itch
- ▶ Review medication list
  - ▶ ACEi/ARBs
  - ▶ TCAs
  - ▶ Amiodarone
  - ▶ Statins
  - ▶ AEDs
  - ▶ Opioids

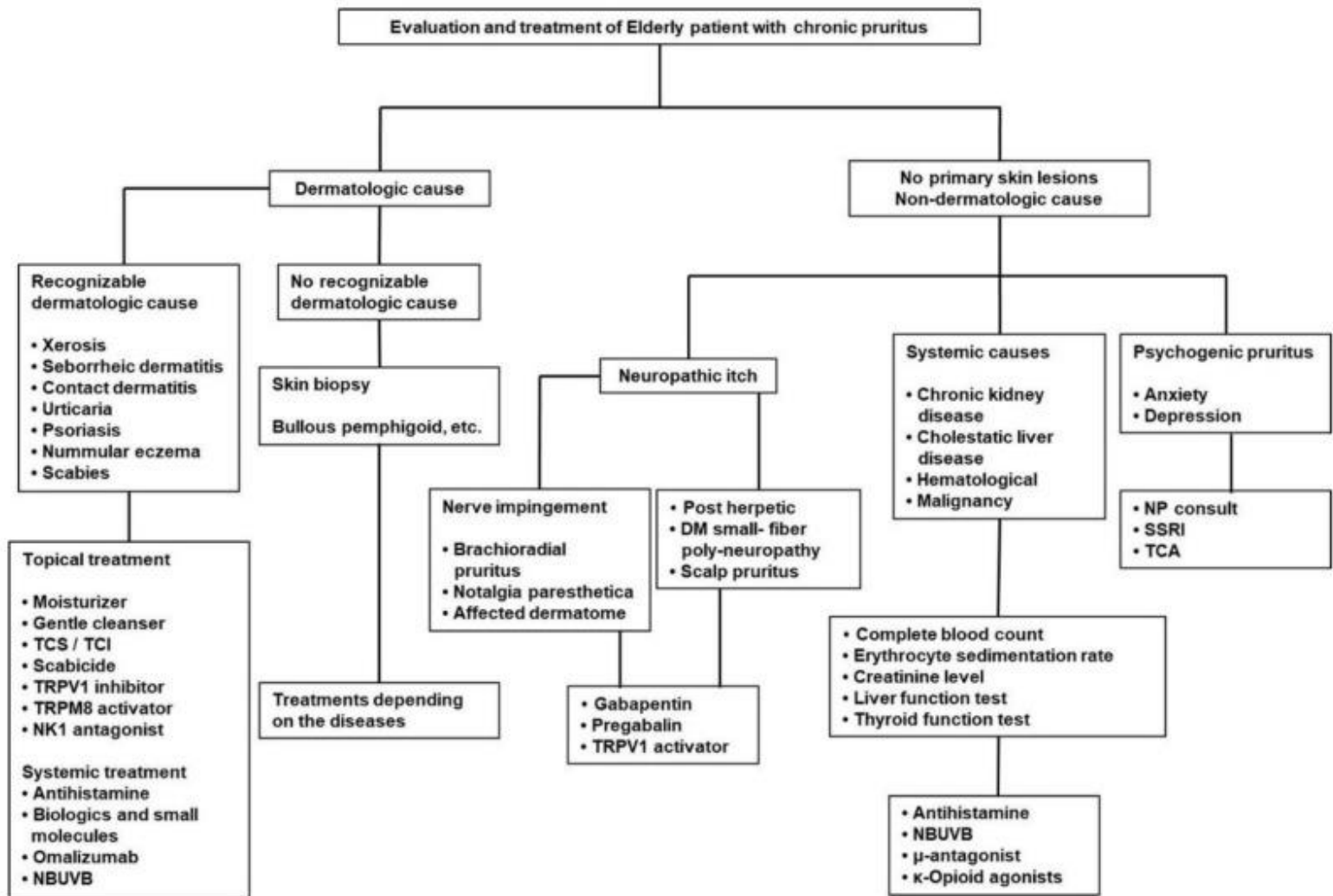
# Evaluation of Non-Dermatologic Causes

- ▶ Pruritus screening labs
  - ▶ CBC with diff
  - ▶ CMP
  - ▶ TSH/T4
  - ▶ Can also consider: HIV, hepatitis panel, serum IgE, drug screen, CXR
- ▶ Routine cancer screening
  - ▶ Mammogram
  - ▶ Colonoscopy

# Management of Non-Dermatologic Causes

- ▶ Initial:
  - ▶ Antihistamines (Zyrtec 10 mg BID)
  - ▶ Vanicream line for skin care
  - ▶ OTC Sarna lotion several times a day
- ▶ When identified underlying cause, tx accordingly:
  - ▶ Cholestatic liver dz → opioid antagonists
  - ▶ Neuropathic → capsaicin, gabapentin





4.

Bruising



# Aging and Bruising

- ▶ Decreased subcutaneous fat → reduced protection from trauma
- ▶ Decreased elastic content in dermis and vasculature → easy bruising

# Ddx of Bruising in the Elderly Patient

- ▶ **Senile purpura\***
- ▶ **Elder abuse\***
- ▶ Drug-related
- ▶ Liver disease
- ▶ Thrombocytopenia
- ▶ Vitamin K or C deficiency
- ▶ Acquired bleeding disorder
- ▶ Malignancy

# Evaluation of Bruising: History

- ▶ Associated trauma
- ▶ Location and severity
- ▶ Bleeding history
- ▶ Nutrition
- ▶ Family hx
- ▶ Medications



## Medications and other substances that may increase the risk of bleeding or bruising

Drug class or substance	Mechanism
Anticoagulants	Interfere with clot formation (secondary hemostasis)
Antiplatelet agents, including NSAIDs	Interfere with platelet function (primary hemostasis)
Glucocorticoids	Interfere with vascular integrity
Antibiotics	Cause vitamin K deficiency, especially with longer use Some interfere with platelet function
SSRIs	Interfere with platelet function (primary hemostasis)
Alcohol	Complications of liver disease may affect clot formation and may cause thrombocytopenia May cause thrombocytopenia due to direct marrow toxicity
Vitamin E	Interferes with vitamin K metabolism in some individuals
Garlic	Interferes with platelet function in some individuals
Gingko biloba	Unknown

# Evaluation of Bruising: Labs

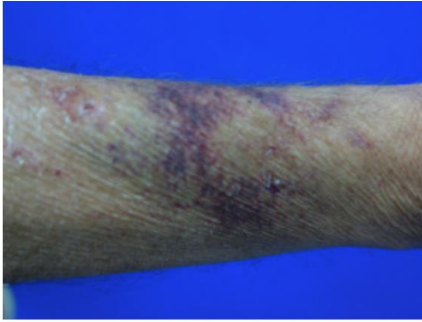
- ▶ CBC, PT, and aPTT if:
  - ▶ Distribution of bruising not mainly along distal extremities
  - ▶ Other evidence of bleeding (eg, recurrent epistaxis, gingival bleeding, hemarthrosis)
  - ▶ Personal or family hx of significant unexpected bleeding
- ▶ Consider testing for renal, hepatic, endocrine, or immune dysfunction only if other indicating s/s

# Senile Purpura

- ▶ Benign, easy bruising after minor trauma
- ▶ Most common cause of bruising in the elderly
- ▶ Irregularly-shaped macules that are dark purple with well-defined margins
- ▶ Surrounding skin thin, inelastic, and pigmented in association with other signs of photoaging
- ▶ Resolve over 1-3 weeks and may produce residual brown pigmentation of skin



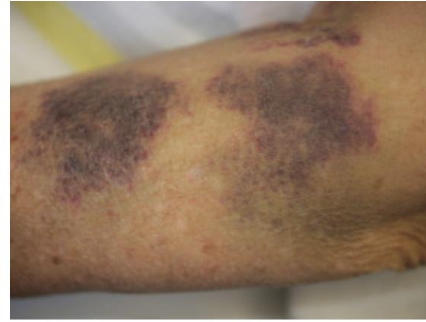
# Senile Purpura



Senile purpura



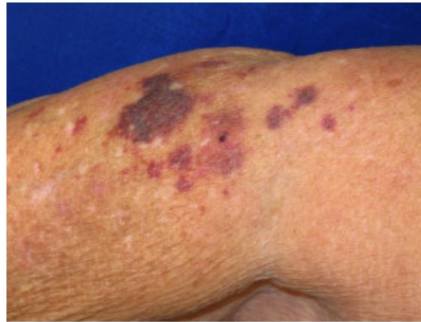
Senile purpura



Senile purpura



Senile purpura



Senile purpura



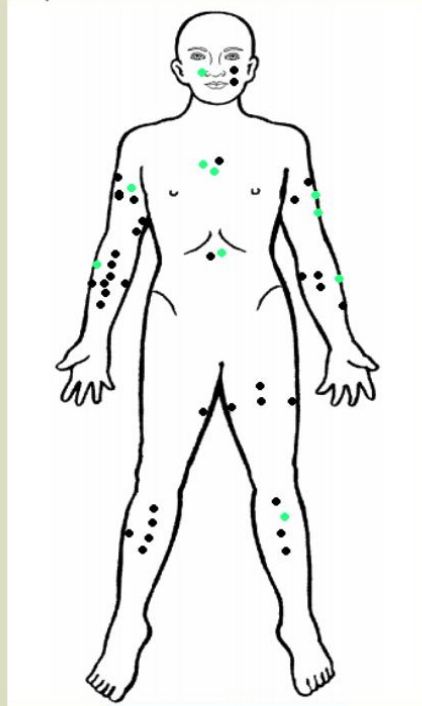
Senile purpura

# Senile Purpura vs. Elder Abuse

	<b>Senile Purpura</b>	<b>Elder Abuse</b>
Size (diameter)	1-4 cm	$\geq 5$ cm
Location	Extremities (extensor surface of forearms + dorsal aspect of hands)	Face, volar surface of arm and forearm, posterior torso
Color changes	No	Yes
Memory	Less than $\frac{1}{4}$ of older adults remembered how they got them	90% could say how they got their bruises; this includes older adults w/ memory problems and dementia

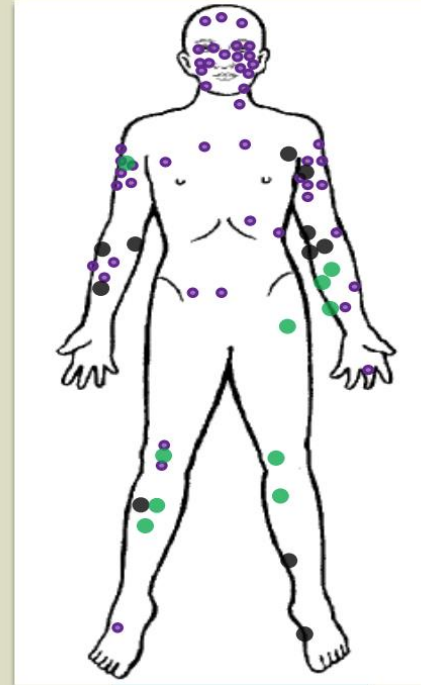
# Anterior Comparison

## Part I: Accidental



● Unknown  
● Accidental

## Part II: Physical Abuse

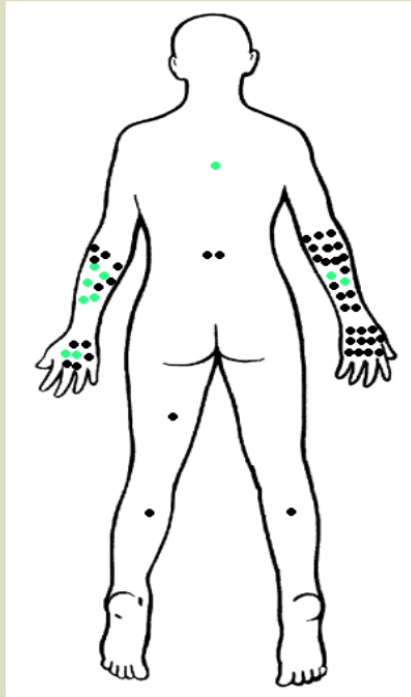


● Unknown  
● Accidental  
● Inflicted

# Posterior Comparison

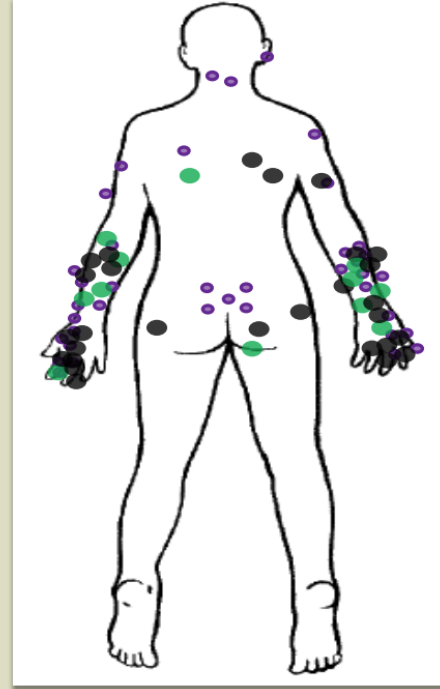
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## Part I: Accidental



● Unknown  
● Accidental

## Part II: Physical Abuse



● Unknown  
● Accidental  
● Inflicted

5.

# Nail Diseases



## Normal Age-Related Nail Changes

- ▶ Thickness: thicker or thinner
- ▶ Contour: ↓ longitudinal curvature, ↑ transverse convexity
- ▶ Texture: more friable
- ▶ Color: yellow - gray

# Common Nail Disorders in Older Adults

- ▶ **Brittle nails\***
- ▶ Onychauxis
- ▶ Onychocryptosis
- ▶ **Onychomycosis\***
- ▶ Onychoclavus
- ▶ Subungual Hematoma
- ▶ Splinter hemorrhages
- ▶ Malignancies

# Brittle Nail Syndrome

- ▶ Increased fragility of nail plate
- ▶ Prevalence: ~20%, with ↑ incidence in F and elderly
- ▶ Characteristics:
  - ▶ Onychoschizia - horizontal splitting
  - ▶ Onychorrhexis - longitudinal splitting and ridging





# Brittle Nail Syndrome – Underlying Causes



- ▶ **External factors:** repetitive cycles of wetting and drying, trauma
- ▶ **Cosmetics:** nail polish, nail polish removers, application of acrylic gels
- ▶ **Systemic disorders:** peripheral arterial disease, iron deficiency anemia, endocrine disorders, biotin deficiency
- ▶ **Associated dermatoses:** eczema, lichen planus, alopecia areata

# Brittle Nail Syndrome - Treatment

- ▶ Tx the underlying condition:
  - ▶ Avoiding contact with external irritants and trauma (eg, using gloves for wet work and chores)
  - ▶ Avoiding aggressive manicures with excessive buffing and filing
  - ▶ Moisturizing the nails with emollients
- ▶ ?Biotin supplementation - 2.5 mg daily x6 months

# Onychomycosis

- ▶ Fungal infection of the nails
- ▶ Prevalence increases with age, reaching ~20% in the elderly
- ▶ Subtypes:
  - ▶ Distal lateral subungual
  - ▶ White superficial
  - ▶ Proximal subungual



# Distal Lateral Subungual Onychomycosis

- ▶ Most common subtype
- ▶ Discoloration starts at distal corner and then spreads
- ▶ Subungual hyperkeratosis



# White Superficial Onychomycosis



- ▶ White patchy discoloration
- ▶ Yields a chalky scale when scraped with a curette or blade

# Proximal Subungual Onychomycosis

- ▶ Relatively uncommon
- ▶ Whitish discoloration originating under the surface of the proximal nail plate
- ▶ Commonly occurs in immunocompromised pts or pts with HIV



# Onychomycosis - Systemic Treatment

- ▶ First-line: **Terbinafine**
  - ▶ Dose: 250 mg qday x6 weeks for fingernails, x12 weeks for toenails
  - ▶ Adverse effects: altered taste/smell, GI distress, liver enzyme abnormalities, hepatotoxicity, and altered drug metabolism
  - ▶ Check baseline LFTs first
  - ▶ ~70% effective

# Onychomycosis – Systemic Treatment

- ▶ Second-line: **Itraconazole**
  - ▶ Dose: 200 mg qday x6 weeks for fingernails, x12 weeks for toenails
  - ▶ Adverse effects: GI distress, liver function abnormalities, severe hepatotoxicity, and altered drug metabolism
  - ▶ Check LFTs before and q6 weeks
  - ▶ Contraindicated in pts with CHF
  - ▶ ~60% effective



# Onychomycosis – Topical Treatment

## ▶ **Ciclopirox**

- ▶ Dose: 8% nail lacquer qday x48 weeks
- ▶ Wipe nail clean with alcohol once weekly
- ▶ Adverse effects: temporary nail changes, local skin irritation
- ▶ < 20% effective



# Onychomycosis – Topical Treatment

- ▶ **Efinaconazole**
  - ▶ Dose: 10% solution qday x48 weeks
  - ▶ Apply one drop to each nail
  - ▶ Adverse effects: ingrown toenails, local skin irritation
  - ▶ < 20% effective



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Thank you! 😊