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Managing Skin Cancer & an Overview of Common Dermatology Conditions

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Spring Health Symposium



Objectives



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- Understand signs and symptoms of skin cancer.
- Identify common types of skin cancer.
- Understand treatment options for skin cancer.
- Understand common dermatologic conditions and management options.



Skin Cancer



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- Three major types.
- Basal Cell Carcinoma
- Squamous Cell Carcinoma
- Malignant Melanoma



Actinic Keratoses



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- The most prominent premalignant lesion(s).
- Increased risk in persons with fair skin or those with occupations/hobbies resulting in increased sun exposure.
- Have the potential to develop into SCC.



Actinic Keratoses



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- Red, scaly keratotic papules that may burn, itch or feel like “a sticker”.



Actinic Keratoses



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- Treatment Options:
- Liquid Nitrogen cryotherapy
- Chemical peels
- Topical: imiquimod, flououracil, Picato
- Photodynamic therapy: Aminolevulinic Acid with Blu-light

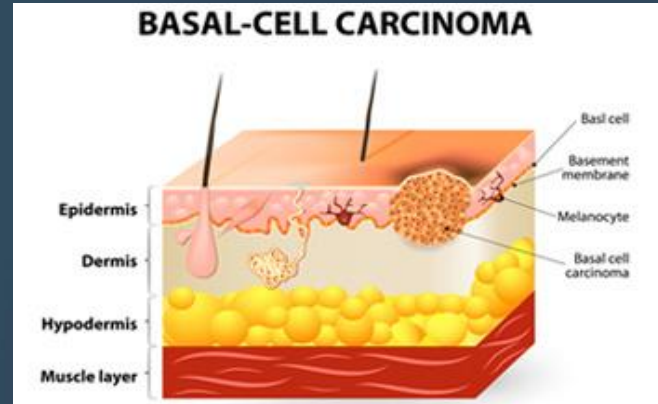


Basal Cell Carcinoma



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- Most common form of skin cancer.
- Sun induced areas most common.
- Arise in basal layer of the epidermis and invade the dermis.
- Locally invasive and destructive.
- Subtypes:
 - Nodular
 - Morpheaform
 - Superficial
 - Pigmented



Basal Cell Carcinoma



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- Nodular Basal Cell
- Pearly, shiny, smooth and telangectic.
- May ulcerate
- Sx: itching, bleeding, non-healing.
- Slow growing; rarely metastasizes
- Will cause tissue destruction.



Basal Cell Carcinoma



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- Morpheaform Basal Cell
- Usually poorly demarcated, indurated, scar appearing.
- Sx: itching, non-healing
- Consider bx if appears as scar but no hx of trauma.



Basal Cell Carcinoma



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- Superficial Basal Cell
- Well demarcated red, scaly plaques.
- May have raised borders.
- Sx: itching, bleeding, non-healing.



Basal Cell Carcinoma



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- Pigmented Basal Cell
- Poorly demarcated.
- Pigment not usually seen throughout entire lesion.
- Sx: itching, bleeding, changing lesion.



Squamous Cell Carcinoma



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- Second most common skin malignancy.
- May occur anywhere on the skin as well as mucous membranes and genitals.
- Some tumors have a significant rate of metastasis.



Squamous Cell Carcinoma



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- SCC in situ
- Poorly demarcated red scaly patches.
- Sun exposed areas.



Squamous Cell Carcinoma



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- Keratoacanthoma
- Relatively common low grade malignancy.
- Pathologically resembles SCC.
- Arise quickly on sun exposed skin.



Treatment Options



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- Treatment for BCC and SCC.
- Depends on histology, location, and age/health of patient.
- Destructive: C&D or cryosurgery
- Topical: imiquimod or 5FU
- Excision: remove cancer with 2mm margins and evaluate margins with permanent sections
- Mohs Surgery: preserve the most normal tissue while checking margins at time of surgery
- Radiation

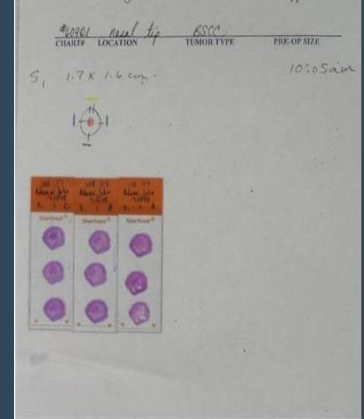


Treatment Options



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- Mohs:



Treatment Options



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Treatment Options



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- Patients who are not surgical candidates:
- Erivedge (vismodegib): indicated for tx of adults with metastatic BCC or locally advanced BCC. 150mg bid
- Odomzo (sonidegib): same indication. 200mg qd
- SE: muscle spasms, leg cramps, alopecia, n/v, diarrhea, metallic taste, fatigue, constipation



Treatment Options



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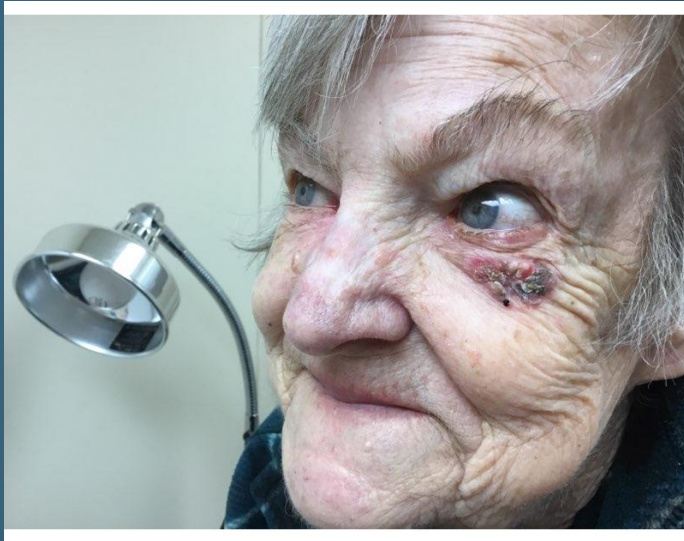
- Vismodegib (Erivedge)
- Muscle cramps: L-carnitine 1500mg at HS
- Dysgeusia: “Miracle fruit” / berry from West Africa, makes things taste sweet. Tablet lasts 30 minutes.
- Decrease dose to help decrease side effects.
- Neoadjuvant usage: Place on drug x 3-6 months to shrink tumor... then do surgical removal.



Treatment Options



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Malignant Melanoma



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- Melanoma is the least common but the most deadly skin cancer, accounting for only about 1% of all cases, but the vast majority of skin cancer deaths.
- Risk factors:
- UV exposure / sunburns
- Fair skin / freckles
- Large number of moles
- Fm Hx



Malignant Melanoma



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- Superficial Spreading Melanoma
- Nodular Melanoma
- Lentigo Maligna
- Acral Lentiginous Melanoma



Malignant Melanoma



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Staging Melanoma.

- American joint Committee on Cancer (AJCC) TNM system.
- T: tumor thickness/ulceration.
- N: lymph node involvement.
- M: metastasis.

Melanoma TNM Classification		
T classification	Thickness	Ulceration Status/Mitoses
Tis	N/A	N/A
T1	≤ 1.0 mm	a: w/o ulceration and mitosis <1/mm ² b: with ulceration or mitoses ≥ 1/mm ²
T2	1.01 - 2.0 mm	a: w/o ulceration b: with ulceration
T3	2.01 - 4.0 mm	a: w/o ulceration b: with ulceration
T4	> 4.0 mm	a: w/o ulceration b: with ulceration
N classification	# of Metastatic Nodes	Nodal Metastatic Mass
N0	0 nodes	N/A
N1	1 node	a: micrometastasis* b: macrometastasis**
N2	2-3 nodes	a: micrometastasis* b: macrometastasis** c: in-transit met(s)/satellite(s) without metastatic nodes
N3	4 or more metastatic nodes, or matted nodes, or in-transit met(s)/satellite(s) with metastatic node(s)	
M classification	Site	Serum LDH
M0	0 sites	N/A
M1a	Distant skin, subcutaneous, or nodal mets	Normal
M1b	Lung metastases	Normal
M1c	All other visceral metastases Any distant metastasis	Normal Elevated

*Micrometastases are diagnosed after sentinel lymph node biopsy and completion lymphadenectomy (if performed).

**Macrometastases are defined as clinically detectable nodal metastases confirmed by therapeutic lymphadenectomy or when nodal metastasis exhibits gross extracapsular extension.

Table 1a: TNM Criteria for Cutaneous Melanoma (2010)

Adapted from *Melanoma of the skin*. In: *Edge SB, Byrd DR, Compton CC, eds. AJCC Cancer Staging Manual. 7th ed. New York, NY: Springer; 2010. (Used with permission)*

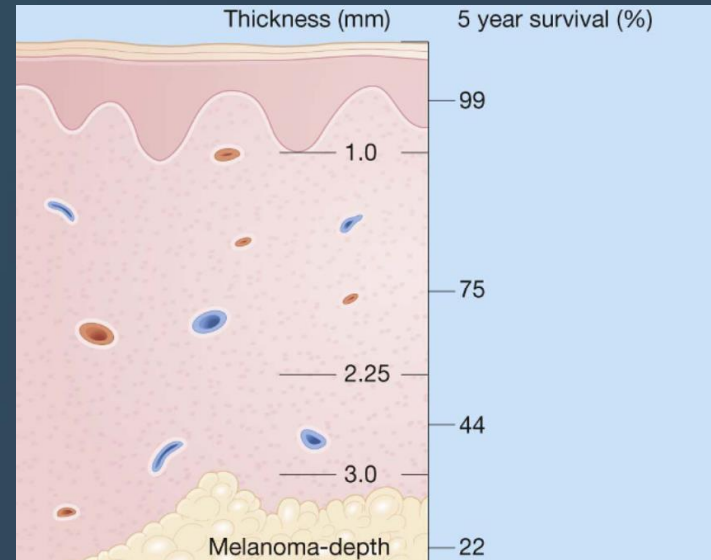


Malignant Melanoma



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- Prognosis
- Breslow Depth
- Ulceration
- Key is early Dx



Malignant Melanoma



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- Treatment:
- Depends on the Breslow Depth of the tumor / stage / location/ and overall health of the patient.
- Wide excision is treatment of choice.
- Sentinel lymph node bx considered in MM > 0.75mm-1mm; if (+) then lymph node dissection.
- If regional metastasis, may need adjuvant tx including immunotherapy, targeted therapy, chemo, radiation or combination.



Malignant Melanoma



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- Gene expression profile testing on tumor.
- DecisionDx / Castle Biosciences
- Need to predict metastatic risk. SLNB has been used, yet 2 out of 3 patients that develop metastatic disease are identified as “node negative” at diagnosis.
- GEP is designed to identify high risk Stage I and II patients based on biological information from 31 genes within their tumor tissue.
- This additional information allows for more informed decisions about how to aggressively manage the disease.





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Common Dermatology Conditions

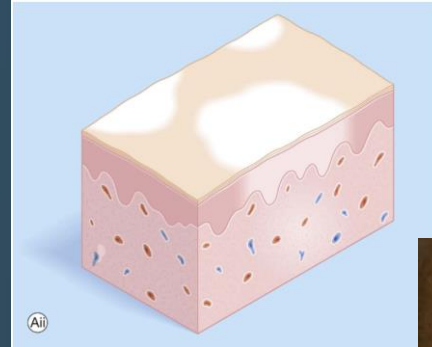


Terminology



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- Macule: a flat skin lesion

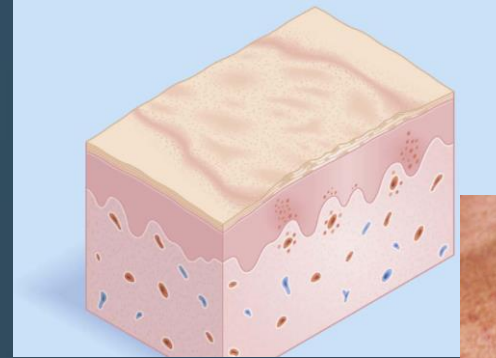


Terminology



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- Patch: a macule with some surface change, either slight scale or fine wrinkling

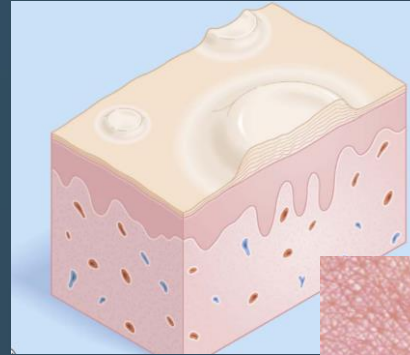


Terminology



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- Papules: small elevated skin lesions <1 cm in diameter

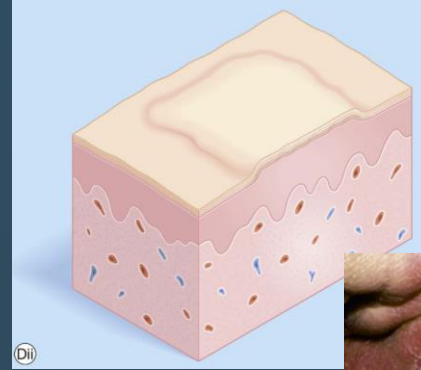


Terminology



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- Plaque: elevated, “platau-like” lesion > 0.5 cm in diameter but without substantial depth

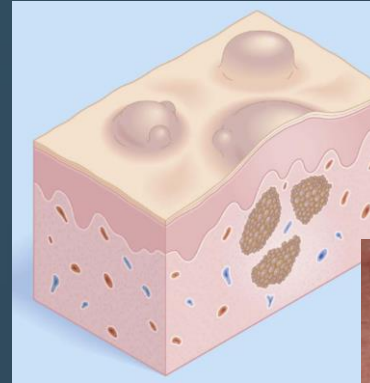


Terminology



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- Nodules: elevated, “marble-like” lesions > 0.5 cm in both diameter and depth

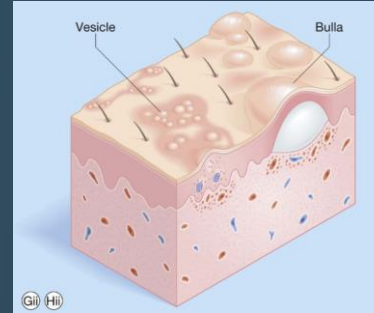


Terminology



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- Vesicles and Bullae: blisters are filled with clear fluid. Vesicles are <0.5 cm and Bullae are >0.5 cm in diameter.

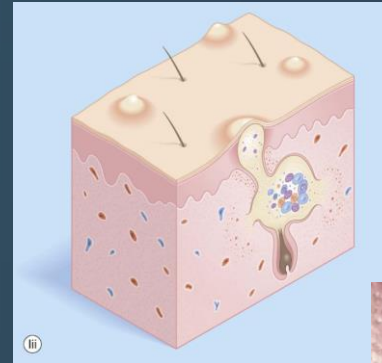


Terminology



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- Pustules: vesicles filled with cloudy or purulent fluid.



Terminology



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- Configuration of skin lesions. Pattern in which skin lesions are arranged. Configuration can help make the diagnosis.

Configuration	Morphology	Disease	Illustration
Linear	Vesicles Papules	Contact dermatitis ^a	See Fig. 3.4
		Psoriasis ^b	
		Lichen planus ^b	
		Flat warts	
Grouped	Vesicles Papules	Herpes (simplex and zoster) Insect bites	See Fig. 3.5
Annular	Scaling	Tinea corporis	See Fig. 3.6
		Secondary syphilis	
		Subacute cutaneous lupus erythematosus	
	Dermal plaque	Granuloma annulare	
Geographic	Wheals Plaques	Urticaria Mycosis fungoides	See Fig. 3.7



Atopic Dermatitis



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- Genetic basis influenced by environmental factors; alterations in immunologic responses in T cells, antigen processing, inflammatory cytokine release, allergen sensitivity, infection.
- Dry skin and pruritus; lichenification; itch-scratch cycle
- Associated with skin barrier dysfunction.



Atopic Dermatitis



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- Treatment:
- Avoid rubbing/scratching. Use emollients.
- Topical glucocorticoids / topical calcineurin inhibitors
- DWDs
- Antihistamines
- NBUVB
- Systemic steroids



Atopic Dermatitis



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- Treatment options for severe cases not responding to conventional treatment.
- Cyclosporine and other immunosuppressive agents. These require close monitoring of side effects.
- Biologic: Dupixent (dupilimab) / SQ every 2 weeks dosing
- MOA: IgG4 antibody that inhibits IL 4 and IL 13, ultimately inhibits the release of proinflammatory cytokines, chemokines and IgE.
- SE: conjunctivitis
- More emerging therapies coming / additional targeted molecular therapies.



Psoriasis



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- A chronic disorder with polygenic predisposition and triggering environmental factors such as bacterial infection, trauma, or drugs.



Psoriasis



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- Typical lesions are chronic, recurring, scaly papules and plaques.
- Pustular eruptions and erythroderma occur.
- Psoriatic arthritis occurs in 20-30% of the patients.
- Care should not just focus only on the skin.... But also on the comorbidities that exist or might develop.
- This had lead to more aggressive systemic treatment earlier in the disease.



Psoriasis



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- Treatments:
- Topicals
- NBUVB
- MTX / Cyclosporine / Oral Retinoids
- NO Prednisone
- Otezla: inhibits PDE4 (Phosphodiesterase) resulting in increased intracellular cAMP levels which decreases inflammatory mediators.
- Biologics: Large landscape / Very effective / Better tolerability and safety / Good protection of joints / TNF, IL12/24, IL 17 and IL 23



Grauloma Annulare



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- A common self-limited, asymptomatic, chronic dermatosis of the dermis.
- Consists of papules in an annular arrangement, commonly arising on the dorsa of the hands and feet, elbows and knees.
- IL Kenalog



Grauloma Annulare



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Molluscum Contagiosum



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- Caused by Pox Virus
- Umbilicated, smooth, dome-shaped papule
- Single or in groups
- Common childhood disease
- Adults: consider STD
- Tx: cryo, cantharadin, curettage, imiquimod, heat therapy



Dermatofibroma



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- Focal dermal fibrosis with overlying epidermal hyperpigmentation.
- Young adults, mostly legs of females.
- 5 mm in size, light tan to brown with “dimple sign”



Myxoid Cyst



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- Digital mucous cyst
- Solitary flesh colored nodule
- DIP or proximal nail fold causing nail plate groove
- Clear viscous fluid from underlying joint space



Nickel Contact Derm



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- Belts, snaps, earrings
- Infraumbilical Dermatitis
- May cause ID Reaction



Delusions of Parasitosis



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- Disturbed, anxious, eccentric patients
- Intractable pruritus with crawling sensation
- Convinced they are harboring parasites
- Bring specimens



Stasis Dermatitis

- Eruption of the lower legs due to peripheral venous disease.
- Venous incompetence lead to RBC extravasation leading to eczematous process.
- Varicose veins, pitting edema
- Hemosiderin staining



Stasis Dermatitis



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- Prevention of swelling and edema is mainstay of treatment!
- Compression stockings
- Leg elevations higher than the heart
- Topical steroids and compresses

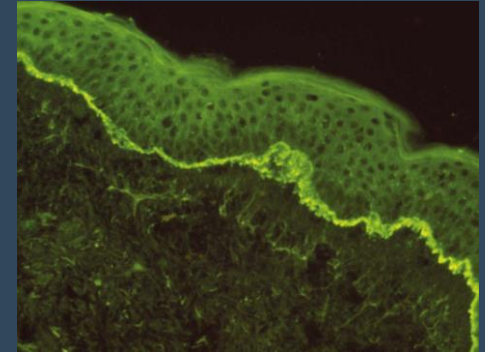
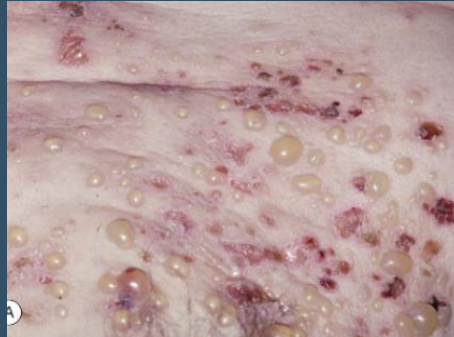


Bullous Pemphigoid



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- A bullous autoimmune disease usually in elderly patients.
- Pruritic papular and/or urticarial lesions with large tense bullae.
- Subepidermal blisters with eosinophils.
- Tx: topical and systemic glucocorticoids and other immunosuppressives.



Acne



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- Disorder affecting pilosebaceous units in the skin. Cause is multifactorial.
- Can continue into 30s and 40s especially in women / Hx of hirsutism or irregular menses consider androgen excess / PCOS
- Tx:
- Topicals: retinoids, BPO, topical antibiotics
- Systemic Antibiotics: MCN, DCN
- Hormonal: OC and spironolactone
- Isotretinoin: oral retinoid





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QUESTIONS???



References



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