

Morphology of skin lesions (language of dermatology)

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Primary lesions: are basic lesions that are produced by the initial disease pathology. Most skin diseases begin with a primary lesions.

Secondary lesions: are either evolve from primary lesions or develop as a consequence of the patient's activities, or as complication of the disease.

Primary lesions	Secondary lesions
Macule	scale
patch	crust
papule	erosion
plaque	ulcer
nodule	fissure
cyst	atrophy
wheal	scar
vesicle	excoriation
bullae	lichenification
pustule	
comedones	
burrow	
telangiectasia	

Primary lesions:

Macule: Flat, circumscribed, non-palpable skin lesion less than 1 cm in diameter. Often hypo or hyperpigmented but could be of any color (pink, red, violet, ..). It can be round, oval, or irregular in shape • May be sharply margined or blend into the surrounding skin.

Ex: freckles, vitiligo, nevi, melasma....

Patch: similar to macule, but more than 1 cm in diameter.

Ex: vitiligo, post inflammatory hypo and hyper pigmentations, ecchymosis, ..

Papule: An elevated solid lesion less than 1 cm in diameter; color and shape varies. It could

be plain, verrucous, pedunculated, Dom-shaped, umbilicatd, fili-form, tinny, excoriated.

Ex: acne, wart, molluscum, nevi,

Plague: similar to papule, but more than 1 cm in diameter.

Ex: psoriasis, dermatitis, tinea,..

Nodule: solid Elevated circumscribed lesion larger and deeper than papule Involves the dermis and may extend to the subcutis. It is Infiltrated and deep on palpation.

Ex: skin tumors, nodular acne

Cyst: A circumscribed solid lesion with a wall and a lumen; the lumen may contain fluid or solid matter.

Ex: epidermal cyst, nodulo-cystic acne

Vesicle: A circumscribed collection of free fluid inside the skin less than 1 cm in diameter.

Ex: herpes labialis, chicken pox,...

Bullae: similar to vesicle but more than 1 cm in diameter.

Ex: pemphigus vulgaris, burn, ...

Pustule: A circumscribed collection of pus inside the skin that varies in size.

Ex: folliculitis, acne, infected eczema,...

Wheal (hive): A firm edematous of the skin resulting from infiltration of the dermis with fluid. Wheals are transient and may last only a few hours. They blanch or disappear on pressure.

Ex: urticaria, insect bite

Comedone: A plug of sebaceous and keratinous material lodged in the opening of a hair follicle; the follicular orifice may be dilated (blackhead, opened) or narrowed (whitehead or closed).

Ex: acne, nevus comedonicus,..

Burrow: A narrow, elevated, tortuous channel produced by a parasite. It is pathognomonic for scabies.

Telangiectasia: Dilated superficial blood vessels.

Ex: spider telangiectasia, steroid atrophy,..

Secondary lesions:

Scales: Excess dead epidermal cells that are produced by abnormal keratinization and shedding. They could be fine or thick, white or brown, loose or adherent.

Ex: psoriasis, pityriasis rosea, dermatitis, ichthyosis, ...

Crust: A collection of dried serum, pus or debris covering skin surface. Color varies yellowish to brown according to the dried material.

Ex: impetigo, wounds, burns,...

Lichenification: Combination of thickening of the skin with hyperpigmentation, and accentuation of natural skin lines. It could occur in any disease with chronic itching.

Ex: dermatitis, scabies, ...

Erosion: A focal loss of epidermis. Erosions do not penetrate below the dermo-epidermal junction and therefore heal without scarring.

Ex: impetigo, dermatitis,

Ulcer: A focal loss of epidermis and dermis; ulcers may heal with scarring.

Ex: bed sore, diabetic foot ulcer,...

Excoriation: removal of the top of the lesions by exogenous injury like excessive itching. It could be linear or punctate.

Ex: excoriated acne, dermatitis, prurigo simplex, ...

Fissure: A linear cleft of epidermis and dermis with sharply defined nearly vertical walls. It is often painful.

Ex: fissures heel, dermatitis,

Atrophy: A depression in the skin resulting from thinning of the epidermis or dermis.

Ex: morphea, steroid atrophy, striae...

Scar: An abnormal formation of connective tissue implying dermal damage after injury or surgery. Scars are initially thick and pink but with time become white and atrophic. Scars could be atrophic, hypertrophic.

Ex: burn, surgical wounds, trauma, acne....

Important histopathological terms:

Parakeratosis: incomplete keratinization characterized by retention of nuclei in the horny layer and associated with a marked underdevelopment of or absence of the granular layer. as in psoriasis and porokeratosis. It represents a physiologic event in mucous membrane.

Acanthosis: increase in thickness of the prickle cell layer. as in chronic eczema.

Hypergranulosis: increase in thickness of granular cell layer. as in chronic eczema and lichen planus.

Acantholysis: loss of cohesion between the epidermal cells .It is either primary which occurs among unaltered cells as a result of dissolution of the intercellular substance as in pemphigus vulgaris, or secondary which occur among altered or damaged cells as in impetigo and herpes viral vesicles.

Spongiosis: intercellular edema between the squamous cells of the epidermis causes an increase in the width of the spaces between the cells .It occurs frequently in the inflammatory processes of the skin as in acute and subacute eczema.

Papillomatosis: upward proliferation of sub-epidermal papillae causing the surface of the epidermis to show irregular undulation .It seen in linear epidermal nevus, solar keratosis, seborrheic keratosis, verruca vulgaris (wart), Acanthosis nigricans and nevus sebaceous.