Classification of skin lesions in Dermatology

The skin lesions can be classified, first, as infectious and non infectious; it is the most important thing. Among the first group, you can include the exanthems and the enanthems. A good example in the first group is acnea (http://www.freewebs.com/rogerqualo.Acne.pdf)

The exanthematous as well as the enathematous skin lesions are called vulgarly rashes in the vernacular language here; when the rash is only temporary, it is allergic

The skin lesion can then be classified as primary or secondary. The primary lesions are the first to appear. The secondary lesions result from the natural evolution of the primary lesions (eg., vesicles bursts leaving an eroded area) or from the patient’s manipulation of the primary lesion (eg., scratching a vesicle leaves an eroded or ulcerated area).

List of some cutaneous condition that are related to infectious and communicable diseases and that have some importance in public health

Papule
Papules are elevated lesions usually < 10 mm in diameter (varying in size from a pinhead to less than either 5 or 10 mm in diameter at the widest point) that can be felt or palpated and often with red to purple discoloration. Examples include

1. nevi (congenital growth or marks on the skin, such as a mole or birthmark),
2. warts (hard, rough lumps growing on the skin, caused by infection with certain viruses and occurring typically on the hands or feet),
3. lichen planus (the cause of this illness is unknown: drugs [quinacine and those with arsenic, bismuth or gold], color photography?)
4. insect bites,
5. seborrheic (a disease of the sebaceous glands characterized by excessive secretion of sebum or an alteration in its quality, resulting in an
oily coating, crusts, or scales on the skin) and actinic keratoses (like “those seen after x-ray therapy”), some lesions of acne - an inflammatory disease of the sebaceous glands and hair follicles of the skin that is marked by the eruption of pimples (papules or pustules), especially on the face,
6. and skin cancers.
7. certain infections such as:
   a) the Secondary stage of Syphilis: avoid this STI (sexually transmitted infection) that can often cause a rash on the palms and feet. The rash may be
      • papular,
      • macular,
      • pustular or vesicular,
      • or nodular.
      • It typically erupts between rolls of fat on the trunk and proximally on the arms, palms, soles, face and scalp. Lesions in warm, moist areas enlarge and erode, producing highly contagious, pink or grayish white condyloma lata
Papules of molluscum contagiosum

Superficial folliculitis with culture-confirmed, community-acquired methicillin-resistant *Staphylococcus aureus*, which appears as erythematous, folliculocentric papules and pustules in the periumbilical region and the adjacent abdomen of a 24-year-old white man (patient 1).

**Vesicles, Pustules and bulla**

A *vesicle* is a serum-filled blister formed *in* or *beneath* the skin. A vesicular rash is one formed by vesicles that are small, fluid-filled blisters < 10 mm in diameter, filled with clear, cloudy and purulent, or bloody fluids. A vesicular rash is characteristic of:

1. some *infections* like
   a) herpes infections,
   b) smallpox or variola major
2. acute allergic contact dermatitis,
3. burns
4. and some autoimmune blistering disorders (eg, dermatitis herpetiformis).
Vesicles and bulla

Oval vesicles in the palm from hand, foot, and mouth disease, in a 3-year-old boy

**Bullae** are clear fluid-filled blisters > 10 mm in diameter. These may be caused by burns, bites, irritant or allergic contact dermatitis, and drug reactions. Classic autoimmune bullous diseases include pemphigus vulgaris and bullous pemphigoid. Bullae also may occur in inherited disorders of skin fragility.

**Pustules** are vesicles that contain pus. Pustules are common in bacterial infections and folliculitis and may arise in some inflammatory disorders including pustular psoriasis.

Group A β-hemolytic streptococcus (GABHS) has been the most frequent cause of pyodermas (superficial skin infections), but there has been a marked shift, with Staphylococcus aureus now much more common.
pustules on the foot of this 15-year-old boy are caused by a group A beta-hemolytic streptococcus infection

**Boils** or **furuncles** are usually caused by a type of bacteria known as staphylococcus, which enter the skin through pores or small wounds. The first sign of the infection is a sensitive lump, of 5 to 30 mm in diameter, under the skin. The swelling spreads and the area becomes red, painful, and warm to the touch. Gradually its center, or core, softens and liquefies as pus forms. Within a few days the pus forces itself to the surface, forming a yellowish tip, or head. When the tip ruptures, pus is released, and the pain caused by the swelling and pressure is relieved. Boils often appear as an isolated skin lesion. A **furuncle** is a deeper version of **folliculitis**. **Carbuncles** are a deep, coalescence of multiple follicles.

**Wheal**
Chigger bites on human skin showing characteristic wheals

**Nodules**
A nodule is a raised solid lesion more than 1 cm. and may be in the epidermis, dermis, or subcutaneous tissue.

**Macule and patch**
A macule is a change in surface color, without elevation or depression and, therefore, nonpalpable, well or ill-defined, variously sized, but generally considered less than either 5 or 10 mm in diameter at the widest point.
Some definitions

- **Macule** – A macule is a change in surface color, without elevation or depression and, therefore, nonpalpable, well or ill-defined variously sized, but generally considered less than either 5 or 10 mm in diameter at the widest point.
- **Patch** – A patch is a large macule equal to or greater than either 5 or 10 mm across depending on one’s definition of a macule. Patches may have some subtle surface change, such as a fine scale or wrinkling, but although the consistency of the surface is changed, the lesion itself is not palpable.

- **Papule** – A papule is a circumscribed, solid elevation of skin with no visible fluid, varying in size from a pinhead to less than either 5 or 10 mm in diameter at the widest point.

- **Plaque** – A plaque has been described as a broad papule, or confluence of papules equal to or greater than 1 cm or alternatively as an elevated, plateau-like lesion that is greater in its diameter than in its depth.

- **Nodule** – A nodule is morphologically similar to a papule, but is greater than either 5 or 10 mm in both width and depth, and most frequently centered in the dermis or subcutaneous fat. The depth of involvement is what differentiates a nodule from a papule.

- **Vesicle** – A vesicle is a circumscribed, fluid-containing, epidermal elevation generally considered less than either 5 or 10 mm in diameter at the widest point.

- **Bulla** – A bulla is a large vesicle described as a rounded or irregularly shaped blister containing serous or seropurulent fluid, equal to or greater than either 5 or 10 mm, depending on one’s definition of a vesicle.

- **Pustule** – A pustule is a small elevation of the skin containing cloudy or purulent material usually consisting of necrotic inflammatory cells. These can be either white or red.

- **Cyst** – A cyst is an epithelial-lined cavity containing liquid, semi-solid, or solid material.

- **Erosion** – An erosion is a discontinuity of the skin exhibiting incomplete loss of the epidermis, a lesion that is moist, circumscribed, and usually depressed.

- **Ulcer** – An ulcer is a discontinuity of the skin exhibiting complete loss of the epidermis and often portions of the dermis and even subcutaneous fat.

- **Fissure** – A fissure is a crack in the skin that is usually narrow but deep.

- **Wheal** – A wheal is a rounded or flat-topped, pale red papule or plaque that is characteristically evanescent, disappearing within 24 to 48 hours. The temporary raised bubble of taut skin on the site of a properly-delivered intradermal injection is also called a wheal, with the ID injection process itself frequently referred to as simply “raising a wheal” in medical texts.

- **Telangiectasia** – A telangiectasia represents an enlargement of superficial blood vessels to the point of being visible.

- **Burrow** – A burrow appears as a slightly elevated, grayish, tortuous line in the skin, and is caused by burrowing organisms. **exanthem**: a skin lesion characterized by an elevated skin eruption accompanying certain infectious or allergic diseases.
- **enanthem**: a skin lesion characterized by a non elevated skin eruption accompanying certain infectious or allergic diseases
- **burn**: skin lesion caused by burn
- **scratch or erosion**: a skin lesion characterized by a thin, shallow cut or mark on your skin not linked to any infectious disease
- **cut**: a bigger cut
- **fissure**: a fissure is a crack in the skin that is usually narrow but deep

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1. Actinism: the intrinsic property in radiation that produces photochemical activity or sensitivity; precancerous keratotic lesions are a frequent disturbing consequence of many years' overexposure to sun; blondes and redheads are particularly susceptible; blacks are rarely affected

2. Pimple: a small red swelling of the skin, usually caused by acne; a papule or pustule

3. Condyloma: a wartlike growth on the skin or mucous membrane, usually in the area of the anus or external genitalia.

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