

# Vulvar hypo & hyper pigmented lesions

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**Squamous cell carcinoma**

**verrucous carcinoma**

**squamous intraepithelial lesions**

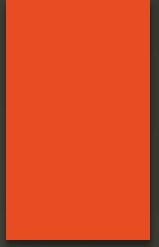
**Human papillomavirus infection (warts)**

# Squamous cell carcinoma

- ▶ (SCC) is in the differential diagnosis of red papules and nodules
- ▶ but may appear white when it occurs in moist areas, due to retention of moisture in thickened surface epithelium



# SCC



# verrucous carcinoma

- ▶ usually appears as a large, firm, skin-colored nodule with a papillomatous (cauliflower-like) surface
- ▶ rare condition, comprising less than 1 percent of vulvar cancer cases
- ▶ The surface may be white due to the presence of moist hyperkeratosis, or the surface may be eroded, as in SCC.
- ▶ Excisional biopsy is generally necessary to differentiate this malignant tumor from that of a large, benign wart

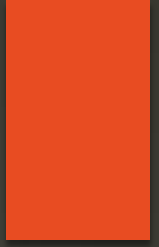
# Verrucous carcinoma



# High-grade squamous intraepithelial lesions (HSIL)

- ▶ (HSIL) of the vulva are in the differential diagnosis of red patches and plaques and brown, blue, or black lesions
- ▶ HSIL may appear white when it occurs in moist areas,

# Vulvar intraepithelial neoplasm





# Human papillomavirus infection (warts)

- ▶ (HPV) infection causes benign warts (condyloma acuminata), which can be located anywhere on the vulva, perineum
- ▶ The firm, irregularly rough papilloma on a broad base may be skin colored, red, pink, tan, brown, black, or white
- ▶ can lead to formation of large, cauliflower-like masses.
- ▶ can also be small plaques, nodules, or flat-topped papules.
- ▶ Brown lesions can look like seborrheic keratoses.

# wart





# **WHITE PATCHES AND PLAQUES**



## Leukoplakia

Leukoplakia signifies the presence of thickened elevated white patches in the skin of the vulva, often complicated by fissuring and ulceration. The patient complains of intense itching and the lesion may be precancerous.


The International Society for the Study of Vulval Disease has recently proposed the use of the term 'hyperplastic dystrophy' instead of leukoplakia.<sup>1</sup> It has also suggested that cases of hyperplastic dystrophy be classified into those without and those with atypia and maintained that only the latter may be precancerous. Undoubtedly this is a useful pathological classification which has a bearing on prognosis and treatment.



[www.xjat.com](http://www.xjat.com)

is a firmly attached white patch on a mucous membrane  
which is associated with an increased risk of cancer

The edges of the lesion are typically abrupt and the lesion changes with time

- 
- ▶ Leukoplakia vulvar also known as dystrophy,
  - ▶ Its incidence rate is 5 to 10 % of the total number of women
  - ▶ leukoplakia vulvar is hereditary, and with a high heritability,
  - ▶ the clinical common color of leukoplakia vulvar are pure white elephant frost, off-white, powdery white or black spot, and white spot.

Symptoms : hypopigmentation, whiteness, itching and burning pain of vulva

- ▶ the skin is dry and cracked, even atrophied and ulcerated,
- ▶ it seriously affects the quality of life.
- ▶ The white spot first appears in the inner and outer **labia minora and clitoris**, and then spreads to the inner labia majora.

# Treatment of Leukoplakia Vulvar

1. **General treatment:** Should pay attention to vulva skin and **keep it clean** and **dry**, **do not scrub with soap** or other irritating drugs, **avoid scratching** with hands or instruments. **Avoid spicy and allergic foods**, **dress loosing** clothe, **don't wear impermeable chemical fiber underwear** to avoid long time hot and humid stasis and aggravating lesions.

2. **Topical hormone therapy, mainly to control local itching**

3. **Surgical treatment ; simple vulva resection with laser therapy**

# white patches and plaques on the vulva

## Common

Vitiligo  
Postinflammatory hypopigmentation  
Lichen sclerosus  
Lichen planus  
Lichen simplex (moist)  
Candidiasis  
Human papillomavirus infection (wart)  
Vulvar intraepithelial neoplasia, usual type

## Uncommon

Vulvar intraepithelial neoplasia, differentiated type  
Squamous cell carcinoma

## Rare

White sponge nevus  
Hailey-Hailey disease  
Verrucous carcinoma





**Vulvar vitiligo**

**Vitiligo represents depigmentation of the skin due to autoimmune lymphocytic attack against melanocytes.**

**It presents as flat, white, sharply marginated patches that can expand centrifugally. There is no scale.**

**In the anogenital region, it may involve the labia majora, perineum, and perianal skin.**

- 
- ▶ in some patients vitiligo is restricted to the anogenital area,
  - ▶ more commonly other sites :

**axillae, dorsal hands, elbows, knees, periorificial facial skin**

- ▶ **A clinical diagnosis of vulvar vitiligo is possible when the classical sites are also involved.**
- ▶ If necessary, biopsy demonstrating the absence of melanocytes

Vitiligo must be differentiated from

lichen sclerosus

postinflammatory  
hypopigmentation

only partial loss of pigmentation occurs




# Postinflammatory hypopigmentation

- ▶ presents as flat, white patches of skin similar to those seen in vitiligo.
- ▶ there is a history of preceding inflammation at the site.



- ▶ the patches are not as white, and the margins of the patches are **less clearly defined than in vitiligo**.
- ▶ Postinflammatory hypopigmentation occurs **more often**, or at least is recognized more often, in individuals with **naturally darker skin color**.



- 
- ▶ The disorder is a consequence of inflammation-induced damage to pigment-producing melanocytes
  - ▶ often occurs with **preceding eczematous** disease
  - ▶ The **diagnosis is made clinically** when the lightening of the skin occurs at the site of previous or concomitant inflammatory disease.
  - ▶ In rare cases, biopsy demonstrating that melanocytes remain present

# Paget disease of the vulva


- ▶ Extramammary Paget disease, **an intraepithelial adenocarcinoma**, accounts for **less than 1 percent** of all vulvar malignancies
- ▶ Most patients are in their **60s and 70s** and **white**.
- ▶ **Pruritus** is the most common symptom( in 70 percent of patients.)



- ▶ Vulvar Paget disease is similar to Paget disease of the breast
- ▶ The lesion has an **eczematoid appearance**; it is well-demarcated and has slightly **raised edges** and a **red background**, often **dotted** with small, pale islands.
- ▶ usually **multifocal** and may occur anywhere on the vulva, mons, perineum/perianal area, or inner thigh.





- 
- ▶ Diagnosis is based on histopathology
  - ▶ Vulvar biopsy should be performed in patients with suspicious lesions, **(those with persistent pruritic eczematous lesions that fail to resolve within six weeks of appropriate therapy.)**
  - ▶ **Invasive adenocarcinomas** may be present within or beneath the surface lesion in up to 25 percent of patients
  - ▶ Paget disease of the vulva **should also be evaluated for the possibility of synchronous neoplasms**, (eg, involving breast, rectum, bladder, urethra, cervix, or ovary)
  - ▶ Treatment consists of wide local excision or vulvectomy, depending upon the extent of disease **(a 2 cm margin is preferred)**

# Lichen sclerosus

- ▶ white macules and patches, which may be hard to differentiate from both vitiligo and postinflammatory hypopigmentation
- ▶ close inspection of the skin surface shows slight wrinkling ("cigarette paper" or "cellophane" wrinkling)
- ▶ may be unilateral or bilateral and symmetrical.
- ▶ Extragenital involvement occurs in 20 to 30 percent of women.



- ▶ These early lesions are most notable on the **labia majora**,
- ▶ but also commonly involve the **perineum** and the **perianal skin** in a figure-eight pattern



**Perianal lichen sclerosus**

Gradually, the labia minora shrink and may become completely effaced

Thickening of the clitoral hood often leads to partial or full entrapment of the clitoris

The most common cause of loss of normal vulvar architecture/scarring with whitening is lichen sclerosus.



**Loss of architecture**

- ▶ The whitened tissue becomes increasingly thickened as the disease progresses
- ▶ The labia may become adherent in the midline, partially closing off the vestibule.



**Severe lichen sclerosus**

- ▶ **Purpura and fissuring** of the involved tissue may also occur
- ▶ **Erosions** frequently develop in lichen sclerosus Bullae can occur, but are rare.



# Symptoms

- ▶ ● Itching is usually prominent,
- ▶ pain if there is widespread erosion.
- ▶ Prepubertal onset in girls may lead to constipation due to fissuring of the perianal skin, leading to pain at the time of defecation.



# Diagnosis

- ▶ A biopsy is typically performed (except in children) to confirm the diagnosis and support long-term treatment
- ▶ Biopsy to exclude cancer is necessary when ulcers or thickened areas fail to respond to therapy since this condition can be associated with (SCC) of the vulva



**Vulvar squamous cell cancer and lichen sclerosus**

# Lichen planus

- ▶ Lichen planus is in the differential diagnosis of **red patches** and plaques
- ▶ the intact tissue surrounding the erosions in lichen planus may appear white or gray.
- ▶ Often, these lesions occur in a **lacy or net-like pattern**



# Lichen simplex chronicus

- ▶ is in the differential diagnosis of red patches and plaques
- ▶ the surface of the lichenified tissue may appear white as a result of prolonged moisture retention.

## lichen simplex chronicus

- Hyperkeratotic, usually ill-defined, grayish, thickened, and sometimes excoriated lesion.
- Usually located over the labia majora.
- Hyperpigmentation.
- Itching is always present and may be intense.



## Non-Neoplastic epithelial disorders

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Lichen Sclerosus



Lichen simplex  
chronicus



Lichen Planus  
It's benign dermatoses

# Candidiasis

- ▶ is in the differential diagnosis of red patches and plaques and yellow papules and pustules
- ▶ However, the sloughing outer-skin layer in candidiasis may appear white as a result of moisture retention.



**Candidiasis vulva**



# White sponge nevus(rare)

- ▶ occurs as a rare, asymptomatic, fairly well-margined, white plaque
- ▶ **within the vulvar vestibule and may occur in the oral cavity**
- ▶ A **positive family history** for similar lesions is usually present.
- ▶ The white color occurs because of the moist hyperkeratosis.
- ▶ Diagnosis requires **biopsy**.





# Hailey-Hailey disease(rare)

and the related papular acantholytic dyskeratosis

- ▶ usually present as red patches and plaques, often with erosion
- ▶ These lesions mimic the appearance of extramammary Paget disease.
- ▶ if there is significant hyperkeratosis, the surface of the lesion may appear white when moist.
- ▶ This disease first appears in younger women,
- ▶ almost always similar plaques on the chest, back, axillae and a positive family history for similar lesions.
- ▶ Biopsy is required for diagnosis.



**Vulvar Hailey-Hailey disease**

# white papules and nodules on the vulva

## Common

Fordyce spots

Milium (plural, milia)

Epidermal cyst

Molluscum contagiosum

Human papillomavirus infection (wart)

Vulvar intraepithelial neoplasia, usual type

## Uncommon

Vulvar intraepithelial neoplasia, differentiated type

Squamous cell carcinoma

Scar

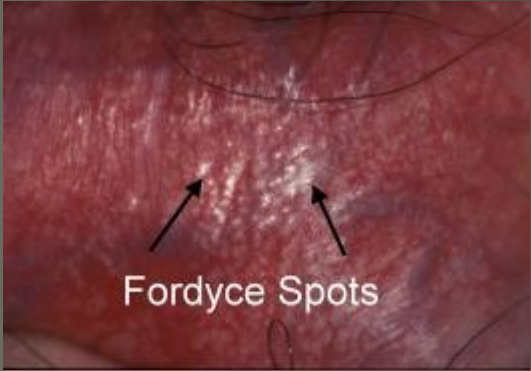
## Rare

Verrucous carcinoma

Condylomata lata

# Fordyce spots

- ▶ normal variants representing **harmless enlarged sebaceous glands**.
- ▶ The **1 to 2 mm** papules are white to yellow, single or multilobular, and can form sheets.
- ▶ They occur in a symmetrical pattern on the medial aspects of the **labia minora**
- ▶ less commonly on the labia majora or the prepuce and clitoris.
- ▶ **must be differentiated from condyloma acuminata, milia, molluscum contagiosum.**
- ▶ The diagnosis is based on location and morphology.



# Milia

- ▶ are firm, white, very small (1 to 2 mm) **epidermal cysts** that are uncommon on the vulva.
- ▶ After nicking the surface with a small needle, the tiny, firm, white cyst can be extracted and often remains intact



# Epidermoid cysts

- ▶ are in the differential diagnosis of red and yellow papules and nodules
- ▶ The **keratin contained** within epidermoid cysts is white.
- ▶ If the cyst is not inflamed and sufficiently superficial, the appearance of the nodule will be white rather than skin colored.



# Molluscum contagiosum

- ▶ is in the differential diagnosis of red papules and nodules
- ▶ However, the dome-shaped papules of molluscum contagiosum, which are often dimpled, may be white, pink, or skin colored





# Scar

- ▶ A vulvar scar can be white or skin colored.
- ▶ A previous punch biopsy may leave a round, flat scar.
- ▶ An episiotomy may cause a linear, white scar along the posterior fossa, extending onto the perineum.
- ▶ A **history of trauma** to the area helps to make the diagnosis.
- ▶ A **biopsy is not usually needed**, but can confirm the diagnosis.

# Condyloma lata

- ▶ ● is the anogenital form of secondary syphilis.
- ▶ sharply marginated, smooth, flat-topped 1 to 2 cm moist papules and small plaques
- ▶ These lesions may be skin-colored, white, pink, or yellow.
- ▶ **Differential diagnosis :(HPV) infection and LSIL or HSIL of the vulva.**
- ▶ A clinical diagnosis can be suspected, but will require confirmation by positive serological tests for syphilis.

# Condylomata lata



# Condyloma lata in the perineal region of a woman with secondary syphilis



**brown, blue, or  
black(hyperpigmentated)  
macules, papules, patches,  
plaques on the vulva**

## Common

Physiologic hyperpigmentation  
Postinflammatory hyperpigmentation  
Human papillomavirus infection (wart)  
Vulvar intraepithelial neoplasia, usual type  
Melanocytic nevus  
Seborrheic keratosis  
Angiokeratoma  
Skin tags

## Uncommon

Vulvar melanosis/lentiginosis  
Lichen planus  
Atypical melanocytic nevus  
Varicosity  
Melanoma

## Rare

Pigmented basal cell cancer  
Hidradenoma papilliferum  
Acanthosis nigricans

# Physiological hyperpigmentation

- ▶ presents as asymptomatic, symmetrical, flat, smooth, brown or brown-black patches on the labia majora and outer edge of the labia minora.
- ▶ It is more prominent in women with naturally dark skin color.
- ▶ Endogenous or exogenous **sex hormones** may lead to further darkening.
- ▶ diagnosis is clinical
- ▶ can be differentiated from postinflammatory hyperpigmentation because the latter is not as symmetrical and even in color.

# Postinflammatory hyperpigmentation

- ▶ arise at sites of previous inflammation from any cause, (such as a scratch or acne)
- ▶ color: light tan to gray, blue, brown, or black.
- ▶ The pigmentation is flat and usually smooth,
- ▶ slight scale may be present when the preceding inflammation was related to an eczematous process



**Lichen sclerosus postinflammatory pigmentation**



- 
- ▶ The site and pattern will depend on the preceding inflammation.
  - ▶ A **history of a prior inflammatory process or trauma** will help to make the diagnosis.

When the pattern is **black or irregular**, vulvar melanosis (lentiginosis) and **melanoma** must be considered.

- ▶ **Several biopsies may need to make a definitive diagnosis.**



# Seborrheic keratoses

- ▶ are small, benign, warty ,occur anywhere on the body, but most commonly on the torso.
- ▶ in the anogenital, they are **restricted to nonmucosal**, keratinizing skin.
- ▶ They typically develop after 35 to 40 years of age.
- ▶ The lesions are **sharply marginated**, tan, brown, or black papules with a warty appearance.
- ▶ Size :3 mm - 2 cm,surface is elevated 2 to 10 mm above the normal skin surface.
- ▶ The surface **scale** can be scraped off with resulting pinpoint bleeding.





# differentiation from:

LSIL,HSIL of the vulva (can be difficult)

HPV lesions(are usually small and multiple, whereas seborrheic keratoses are often solitary on the vulva)

basal cell carcinoma

dysplastic nevi

melanom.



**A shave biopsy is diagnostic**

# Angiokeratomas

- ▶ The papules of angiokeratomas are in the differential diagnosis of red papules and nodules ,but they are often blue, violaceous, or even black.



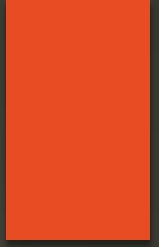


# Skin tag (acrochordon)

- ▶ Skin tags (acrochorda or fibroepithelial polyps) are common, benign, soft, skin-colored, tan, or brown papules with short, thin stalks that are 1 to 3 mm.
- ▶ They occur as single lesions or in groups on the inguinal folds.
- ▶ They are more commonly found and more numerous in number in obese women.
- ▶ When traumatized, they can be blue, purpuric, or swollen and black.




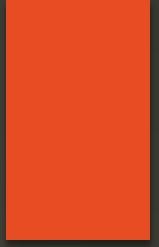




# Melanocytic nevus

- ▶ are common;
- ▶ 90 percent of nevi are the typical, benign type, presenting as a symmetrical, tan or brown macules (junctional nevi) or papules (compound or intradermal nevi).
- ▶ The edges are sharply marginated,
- ▶ the color is homogenous, and most are less than a centimeter in diameter.
- ▶ Slight variation in color and outline is normal.

- 
- ▶ **differentiated from melanoma by :their symmetry, sharp border, homogenous color, and small size.**
  - ▶ differentiated from other pigmented lesions, such as seborrheic keratosis and (HPV)infections , by their smooth surface.
  - ▶ Any questionable lesion should have a complete narrow excision or adequate biopsy



# Vulvar melanosis/lentiginosis

- ▶ Vulvar lentigines are not uncommon.
- ▶ A lentigo is an **asymptomatic flat**, tan, brown, or black pigmented, macule, 2 to 8 mm in diameter.
- ▶ These lesions may be poorly demarcated, **irregular in outline**, and asymmetric in shape.
- ▶ They are found mostly on the **labia minora**.



- ▶ **Vulvar melanosis** is a larger, asymptomatic, hyperpigmented patch. The color is darker and is usually deep brown or black.
- ▶ may be poorly demarcated, **irregular in outline**, and **asymmetric**
- ▶ most often located along the edges of the labia minora and the vulvar trigone.
- ▶ It may develop within the lesions of lichen sclerosis.
- ▶ **The differential diagnosis :postinflammatory hyperpigmentation, LSIL or HSIL of the vulva, dysplastic nevi, melanoma**
- ▶ **Several biopsies may be needed for diagnosis.**





# Atypical melanocytic nevus

- ▶ can present on the vulva (labia minora or majora),
- ▶ The pigmented macules are smooth surfaced, with **one or more atypical features such as asymmetry, nonsharp margins, larger size, and variable pigmentation within the lesion.**
- ▶ differential diagnosis: malignant melanoma.
- ▶ **An excisional biopsy is recommended.**







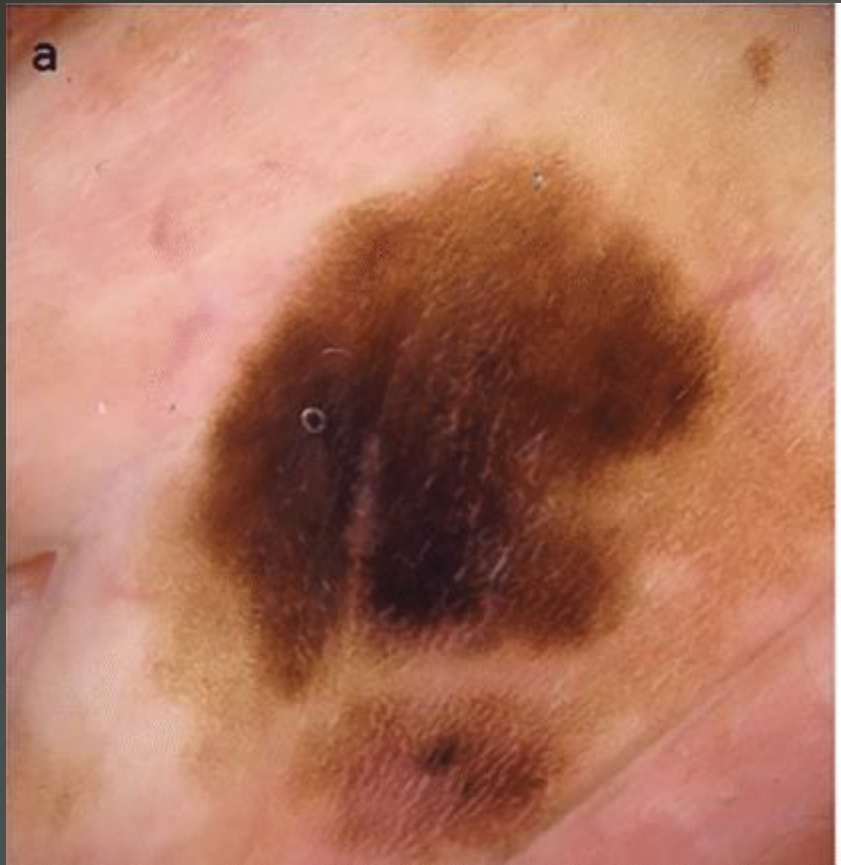
Figure 1. A well-circumscribed, brown, homogeneous color

# Melanoma

- ▶ **the second most common type of cancer of the vulva, after SCC**
- ▶ represent approximately 10 percent all vulvar neoplasms

**Early signs** :change in size, shape,color of a lesion.  
Pruritus is an early symptom.

**Late signs** : bleeding, ulceration, pain, dyspareunia,  
mass ,tenderness.



# Lesions suspicious for melanoma are often characterized by the ABCDEs:

They are asymmetrical (A)

have irregular or scalloped border (B)

often black in color (C) or with shades of red, white, blue;

may have a diameter (D) greater than 6 mm

are evolving (E)

# Vulvar melanoma

- ▶ Surgical management of vulvar melanomas should include:
- ▶ resection of the primary tumor by **wide local excision**. (margin 1-2cm)
- ▶ The excision contains all layers of skin and subcutaneous tissues, extending to the muscular fascia below.
- ▶ Radical vulvectomy is reserved for large tumors

# Varicosity

- ▶ Varicose veins on the vulva are often seen in pregnant women
- ▶ In most cases, they can be diagnosed on clinical examination
- ▶ They can be isolated or in groups
- ▶ Compression with a glass slide results in lesion disappearance, confirming the diagnosis.

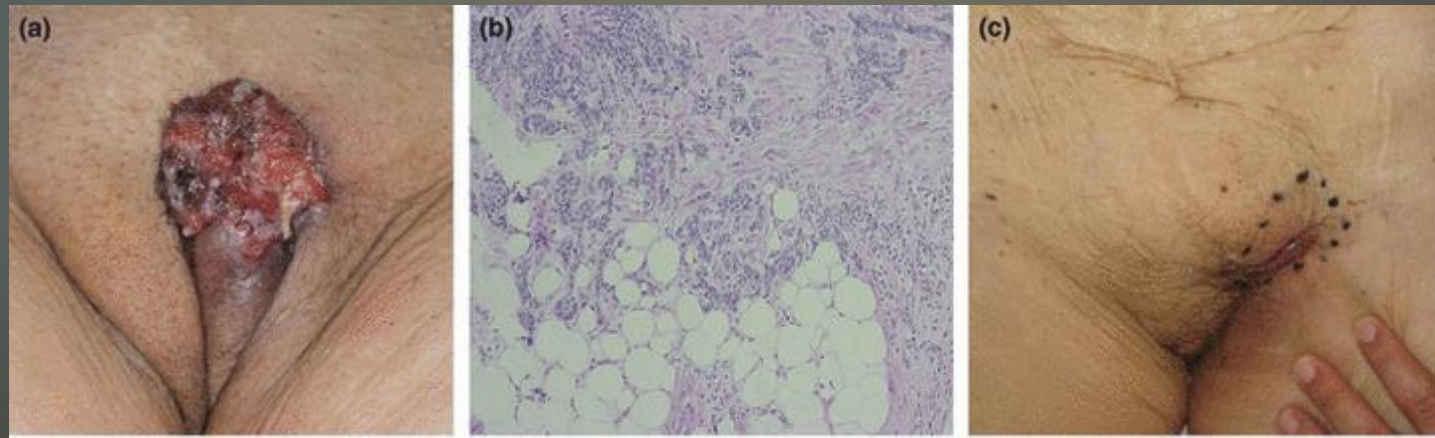




**Vulvar varicosity**

# Pigmented basal cell carcinoma (rare)

- ▶ The lesions of pigmented basal cell carcinoma mostly occur on the labia majora in older woman
- ▶ as solitary, usually skin-colored to pink and sometimes tan-to-brown papules, small plaques, or nodules. Sometimes, the surface is eroded or ulcerated.





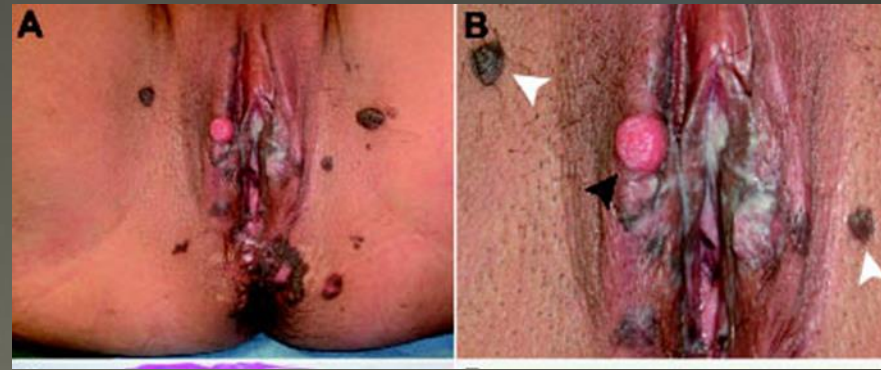
# Acanthosis nigricans

- ▶ is an **uncommon** vulvar condition
- ▶ **affecting those with obesity, thyroid disease, metabolic syndrome**
- ▶ It presents as **brown areas in the body folds**, especially around the **neck and in the axillae**, but also in the crural folds.
- ▶ The surface is thickened and velvety, which gives the skin a dirty appearance.
- ▶ A biopsy will confirm the clinical diagnosis.

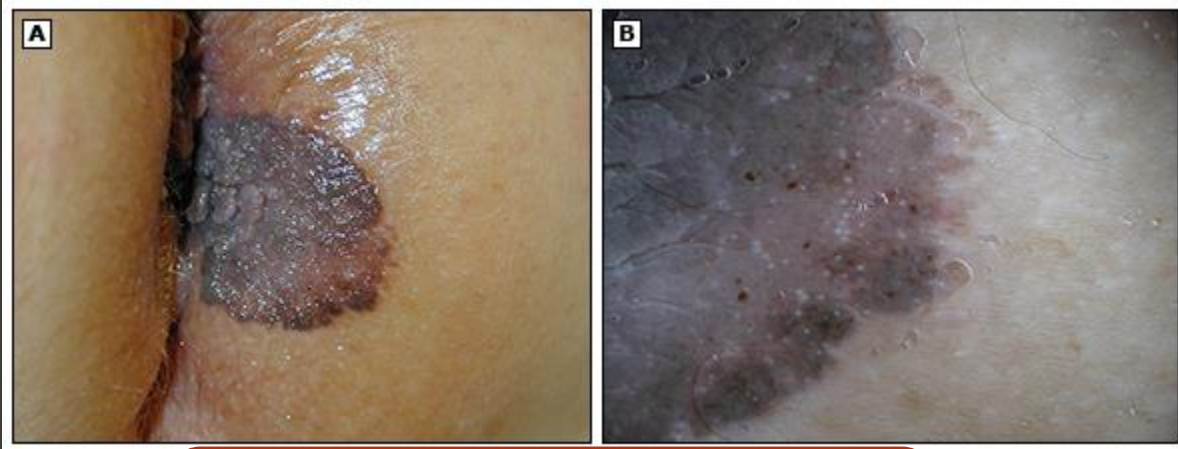
# Acanthosis nigricans



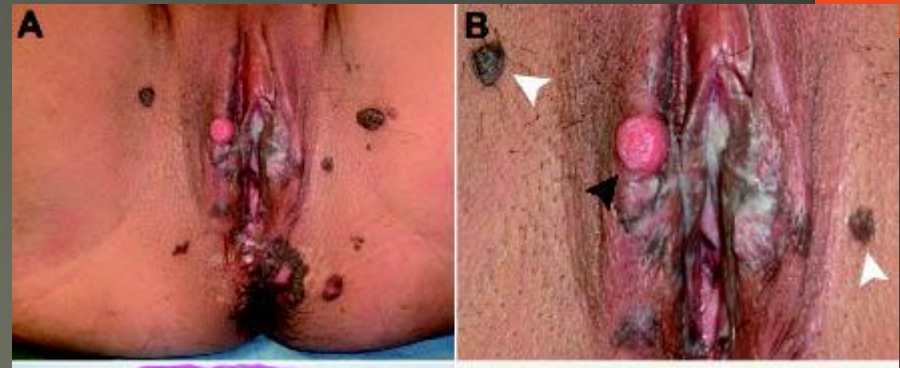
# Bowen disease



- ▶ **known as carcinoma in situ** and squamous intraepidermoid neoplasia
- ▶ **Itching** is a common symptom
- ▶ **labia majora** tend to be involved more than the labia minora.
- ▶ The lesions **are scaly, crusted, erythematous** plaques.
- ▶ Over time, as many as 10% of these lesions experience invasion.
- ▶ Squamous cell carcinoma from Bowen disease tends to be more aggressive



Pigmented bowen disease





**Final point??**





# Hydradenoma

- The hidradenoma is a rare, small, benign vulvar tumor that originates from apocrine sweat glands of the inner surface of the labia majora and nearby perineum. Occasionally, they may originate from eccrine sweat glands.
- For unknown reasons, they are discovered exclusively in white women between the ages of 30 and 70, most commonly in the fourth decade of life. These tumors have not been reported prior to puberty. Hidradenomas may be cystic or solid. Approximately 50% of hidradenomas are less than 1 cm in diameter.
- These tumors have well-defined capsules
- Treatment - surgical