

A 35 years-old woman presents with a long-standing H/O a skin pigmented lesion in her lower leg. However, recently she has noticed this to be larger and growing in size. The lesion is itchy and has bled from the surface a few times.

### ① Differential Diagnosis ⇒

- ① Malignant Melanoma
- ② Cutaneous squamous Cell Carcinoma
- ③ Cutaneous metastasis
- ④ Epithelioid sarcoma [The superficial type will ulcerate, causing a mistaken dx.]

**Definition of Malignant melanoma:** It's a highly malignant tumor arising from the melanocytes. They arise from a

pre-existing naevus with Junctional Component. And is the most common life-threatening dermatological disease.

### Risk factors ⇒

- ① UV radiation exposure
- ② Light skin
- ③ Xeroderma pigmentosa
- ④ Immunosuppression
- ⑤ Genetics → - BRAF gene mutation (most common)  
- CDKN2A

\* They could be found in the soles or palms.

### Types of malignant melanoma ⇒

- ① superficial spreading melanoma
  - Commonest
  - Better prognosis
  - patches of deep pigmentation on its surface

## ② Nodular melanoma ⇒

- Nodular in shape
- Deeply pigmented, may ulcerate or bleed
- Occur on a background of lentigo maligna
- It tends to invade deeply instead of spreading superficially, so lymphatic spread is early ⇒ poor prognosis

## • other less common forms ⇒

③ lentigo maligna ⇒ A brown pigmented patch with an irregular outline "Island-like" usually found on cheeks of elderly women (>70) ⇒ Hutchinson's freckle  
- malignant change is indicated by deeper pigmentation or nodular formation.

## ④ Amelanotic melanoma

③ Acral → a subtype of it is subungual melanoma

④ Choroidal melanoma (Liver metastasis)

⑤ mucosal melanoma

## - signs of malignant change in a melanoma ⇒

- ① ↑ or irregular size
- ② = = = pigmentation
- ③ Bleeding or ulceration
- ④ spread of the pigment from edge of nevus
- ⑤ Itching or pain
- ⑥ formation of daughter or satellite nodules
- ⑦ LN or distant spread

## - Metastatic spread ⇒

- ① local → ulceration
- ② lymphatic → producing cutaneous nodules by progressive proximal spread, and by lymphatic emboli to regional LNs
- ③ Hematogenous → To Any and every organ in the body  
Brain, lung, liver, Bone

## Management of Malignant melanoma $\Rightarrow$

The Breslow Depth  $\Rightarrow$  Thickness from the granular layer to the lowest detectable tumor cell, and this index correlates with the risk of mets.

Breslow index is the most important prognostic factor

If Breslow thickness  $\geq$  stage 2 ( $> 1\text{mm}$ )  $\Rightarrow$  Then perform sentinel LN biopsy

(So)

① The nodule is 1st removed for urgent histological exam (frozen section), if malignant melanoma is confirmed, a wide local excision of the area is performed with a safety margin corresponding to the Breslow thickness.

Frozen section  
 $\downarrow$   
Rapid microscopic analysis of the specimen

② If the sentinel LN is involved, the regional LN should be excised by block dissection.

- US / MRI can be used to confirm LN & distant metastasis (Staging)

- There's also adjuvant therapy by immunotherapy

$\downarrow$   
High dose interferon- $\alpha 2b$   
may be used if there's distant mets to prolong survival