Skin Cancer

- Skin cancer is one of the most common cancers.
- In general, skin cancer can be divided into: non-melanoma (basal cell carcinoma and squamous cell carcinoma) and melanoma (malignant melanoma).
- Malignant melanoma is the most life-threatening type of skin cancer and is one of the few cancers affecting the younger population.
- Sun exposure is the single most preventable risk factor for skin cancer.

Learning outcomes:

Ability to recognise:

- basal cell carcinoma

- squamous cell carcinoma

- malignant melanoma

Basal cell carcinoma

Description

- A slow-growing, locally invasive malignant tumour of the epidermal keratinocytes normally in older individuals, only rarely metastasises
- Most common malignant skin tumour

Causes

- Risk factors include UV exposure, history of frequent or severe sunburn in childhood, skin type I (always burns, never tans), increasing age, male sex, immunosuppression, previous history of skin cancer, and genetic predisposition

Presentation

- Various morphological types including nodular (most common), superficial (plaque-like), cystic, morphoeic (sclerosing), keratotic and pigmented
- Nodular basal cell carcinoma is a small, skin-coloured papule or nodule with surface telangiectasia, and a pearly rolled edge; the lesion may have a necrotic or ulcerated centre (rodent ulcer)
- Most common over the head and neck

Management

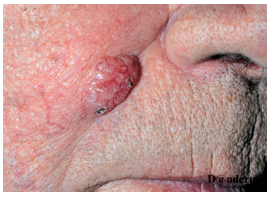
- Surgical excision - treatment of choice as it allows histological examination of the tumour and margins
- Mohs micrographic surgery (i.e. excision of the lesion and tissue borders are progressively excised until specimens are microscopically free of tumour) - for high risk, recurrent tumours
- Radiotherapy - when surgery is not appropriate
- Other e.g. cryotherapy, curettage and cautery, topical photodynamic therapy, and topical treatment (e.g. imiquimod cream) - for small and low-risk lesions

Complications

- Local tissue invasion and destruction

Prognosis

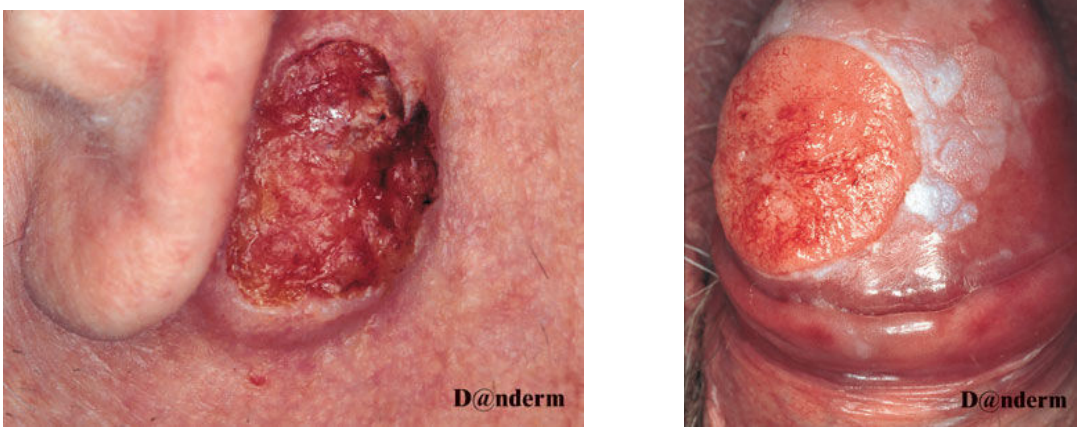
- Depends on tumour size, site, type, growth pattern/histological subtype, failure of previous treatment/recurrence, and immunosuppression



Basal cell carcinoma – nodular type

Squamous cell carcinoma

Description	● A locally invasive malignant tumour of the epidermal keratinocytes or its appendages, which has the potential to metastasise
Causes	● Risk factors include excessive UV exposure, pre-malignant skin conditions (e.g. actinic keratoses), chronic inflammation (e.g. leg ulcers, wound scars), immunosuppression and genetic predisposition
Presentation	● Keratotic (e.g. scaly, crusty), ill-defined nodule which may ulcerate
Management	● Surgical excision - treatment of choice ● Mohs micrographic surgery – may be necessary for ill-defined, large, recurrent tumours ● Radiotherapy - for large, non-resectable tumours
Prognosis	● Depends on tumour size, site, histological pattern, depth of invasion, perineural involvement, and immunosuppression



Squamous cell carcinoma – adjacent to ear (left) and glans penis (right)

Malignant melanoma

Description

- An invasive malignant tumour of the epidermal melanocytes, which has the potential to metastasise

Causes

- Risk factors include excessive UV exposure, skin type I (always burns, never tans), history of multiple moles or atypical moles, and family history or previous history of melanoma

Presentation

- The **'ABCDE Symptoms'** rule *(*major suspicious features)*:

  Asymmetrical shape*

  Border irregularity

  Colour irregularity*

  Diameter > 6mm

  Evolution of lesion (e.g. change in size and/or shape)*

  Symptoms (e.g. bleeding, itching)

- More common on the legs in women and trunk in men

Types

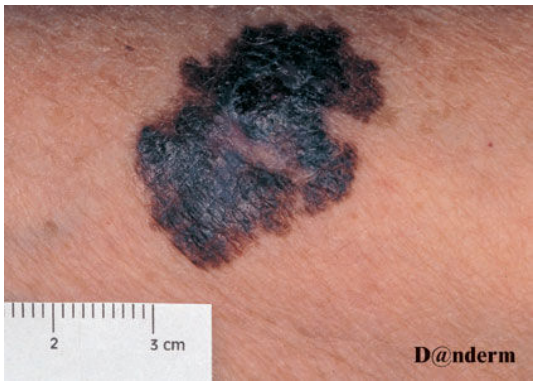
- Superficial spreading melanoma – common on the lower limbs, in young and middle-aged adults; related to intermittent high-intensity UV exposure
- Nodular melanoma - common on the trunk, in young and middle-aged adults; related to intermittent high-intensity UV exposure
- Lentigo maligna melanoma - common on the face, in elderly population; related to long-term cumulative UV exposure
- Acral lentiginous melanoma - common on the palms, soles and nail beds, in elderly population; no clear relation with UV exposure

Management

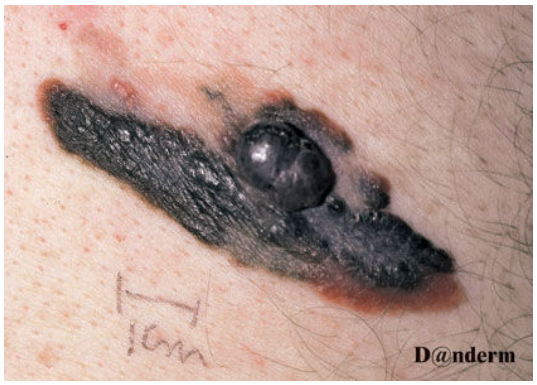
- Surgical excision - definitive treatment
- Radiotherapy may sometimes be useful
- Chemotherapy for metastatic disease

Prognosis

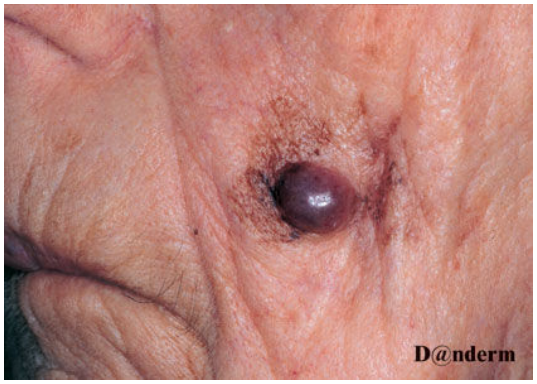
- Recurrence of melanoma based on Breslow thickness (thickness of tumour): <0.76mm thick – low risk, 0.76mm-1.5mm thick – medium risk, >1.5mm thick – high risk
- 5-year survival rates based on the **TNM** classification (primary **T**umour, regional **N**odes, **M**etastases): stage 1 (**T** <2mm thick, **N**0, **M**0) - 90%, stage 2 (**T**>2mm thick, **N**0, **M**0) – 80%, stage 3 (**N**≥1, **M**0) – 40- 50%, and stage 4 (**M** ≥ 1) – 20-30%



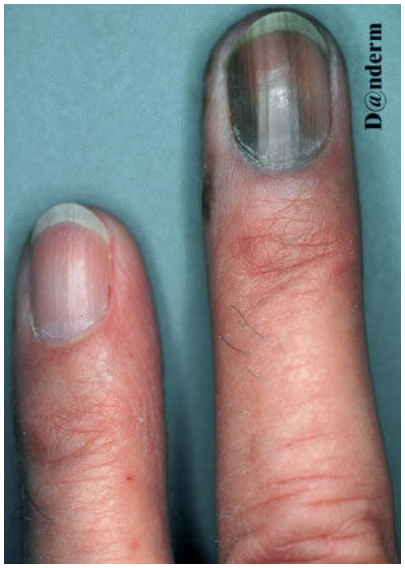
Superficial spreading melanoma



Nodular melanoma



Lentigo maligna melanoma



Acral lentiginous melanoma