

## Non-Melanocytic Skin Carcinoma

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### I. GROSS DESCRIPTION

#### **Specimen**

- smear cytology/curettage/shave biopsy/punch biopsy/incision biopsy/excision biopsy/Mohs' surgery.
- size: length × width × depth (mm).
- curettage, shave and punch biopsies are often small, processed intact and embedded in toto. Slightly larger shaves and punches may be bisected and similarly all processed. In general, margins are not marked and this is also so for incision biopsies which are for diagnostic purposes from the edge of a larger lesion. Histological levels are usually examined. Excisional biopsies attempt to remove the lesion with clear margins of normal skin. Assessment is aided by painting the deep and lateral limits and use of quadrant blocks or serial transverse slices tailored to local protocols. Thus, cases are handled individually according to the specimen size, type of lesion and its size and position within the specimen. If initial histological sections fail to reveal a tumour when an experienced dermatologist has given a strong clinical suspicion that there is one present, the pathologist must always be prepared to carry out further levels for examination. Additional histological clues can be evident, e.g. epidermal dysplasia, dermal inflammation/hyalinization or retraction artefact that would suggest the possibility of an adjacent carcinoma. This is particularly so for recurrences which can be small and difficult to demonstrate. Tumours arising in the face and around the eyes and ears are more difficult to treat with a higher incidence of local recurrence and metastasis. A more complex dermatological surgical technique may be required with peroperative frozen section checking of circumferential surgical margins and wound reconstruction (Moh's micrographic surgery). Sometimes primary or secondary excision specimens are submitted with a central circular deficiency due to prior sampling for research by the clinician. Care must be taken in orientation of the specimen and accurate assessment of tumour diameter and margin distances can be somewhat problematic.

**Tumour****Site**

- anatomical site: limbs/trunk/head/neck/perineum/epidermal/dermal/subcutaneous.

**Size**

- length × width × depth (mm) or maximum dimension (mm).

**Appearance**

- verrucous/warty/nodular/exophytic/sessile/ulcerated/invaginated/cystic/plaque/haemorrhagic/necrotic.

**Edge**

- circumscribed/irregular.

**2. HISTOLOGICAL TYPE**

Actinic keratosis, Bowen's disease, squamous cell carcinoma and basal cell carcinoma are the commonest solar-induced non-melanocytic tumours, other skin malignancy being relatively unusual. They arise either as red, scaly patches or as nodular lesions on the sun-exposed head and neck areas of fair-skinned people. A minority are associated with genetic disorders or areas of chronic scarring.

***Squamous cell carcinoma***

- keratinizing/non-keratinizing.
- 80% are well differentiated and keratinizing.
- variants with adverse prognosis:
  - acantholytic (pseudoglandular or adenoid)
  - spindle cell (sarcomatoid)
  - pseudoangiosarcomatous (pseudovascular)
  - small cell or basaloid
  - post traumatic (e.g. Marjolin's ulcer)
  - adenosquamous (mixed differentiation).
- others:
  - verrucous: high rate of local recurrence on the sole of foot and at the anal margin. Locally invasive, exophytic with "church spire" hyperkeratosis and a pushing deep margin of cytologically bland bullous processes
  - clear cell (elderly, scalp)
  - papillary
  - lymphoepithelial
  - keratoacanthoma: rapid growth and crateriform with a central keratin plug and lipped rim of hyperplastic squamous epithelium. Difficult to distinguish from and regarded by some as a well-differentiated variant of squamous carcinoma.