Benign and Premalignent Skin Lesions

This pathway is about benign and premalignant skin lesions. See also Suspected Melanoma.

Disclaimer

Contents

Background

About benign and premalignent skin lesions

- ***Premalignant skin lesions***:
  - *Actinic/solar keratosis:*
    - *Caused by chronic, cumulative sun exposure.*
    - *Variably scaly, crusty, and spiky patches which vary from very tiny to 1 to 2 cm in diameter each. Can be red and/or pigmented. Can feel like patches of dry skin.*
    - *Very common – developed by 40 to 50% of Caucasians aged > 40 years.*
    - *Considered a precursor lesion to developing skin cancer, with reported annual transformation rates to squamous cell carcinoma (SCC) ranging from 0.025 to 20%.*[1]
  - *Actinic cheilitis:*
    - *Caused by chronic cumulative sun exposure – usually lower lip.*
    - *Chronic scaling or white plaques of the vermilion border.*
    - *More common in males than females.*
    - *Histologically same as actinic keratosis.*

- ***Benign skin lesions:***
  - *Seborrhoeic keratosis:*
    - *Also known as senile warts or barnacles.*
    - *Appear as adherent warty plaques, usually pigmented and waxy.*
    - *More common with increasing age > 40 years.*
    - *Occur in sun-exposed sites and elsewhere in people with genetic propensity.*
    - *Solar lentigines are similar, but thinner than seborrhoeic keratosis, and only occur in sun-exposed sites especially back of hands.*
  - *Epidermoid (sebaceous) cyst:*
    - *Presents as a firm skin-coloured nodule with punctum.*
    - *Caused by blockage of follicular infundibulum, the epidermal cells of which break down and can rupture into surrounding tissue causing inflammation and granulomatous reaction. Generally contains thick, yellow paste-like sebum which has a pungent aroma.*

Assessment

Practice Point

Consider biopsy if diagnosis uncertain

If uncertain about diagnosis for any skin lesion with suspicious features, consider biopsy.

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1. Take a history to determine if any **risk factors** or **suspicious symptoms** are present.
   - ***Risk factors***
     - *Work or leisure history associated with increased sun exposure or severe sunburn*
     - *Personal or family history of skin cancer, especially melanoma in first-degree relatives*
     - *Fair or red hair colour*
     - *History of blistering sunburn*
     - *Immunosuppression*
     - *Increasing age*
     - *Lesion noticed by another person*
     - *Multiple solar keratoses*

- *Previous basal cell carcinoma (BCC) or squamous cell carcinoma (SCC)*
- *Previous exposure to arsenic*
- *Previous radiotherapy*
- *Skin that burns and does not tan*
- *Solarium use*
- *Tendency to freckle*

➢ ***Suspicious symptoms***
- *Lesion persists, bleeds, or is not healing at 4 weeks*
- *Lesion is changing or growing in size, colour, or shape*
- *Thickened or indurated*
- *Tender to touch*
- *Symptoms the patient is concerned about*

2. Perform **examination,** preferably including dermoscopy. Consider using a **suggested framework for conducting skin checks.**

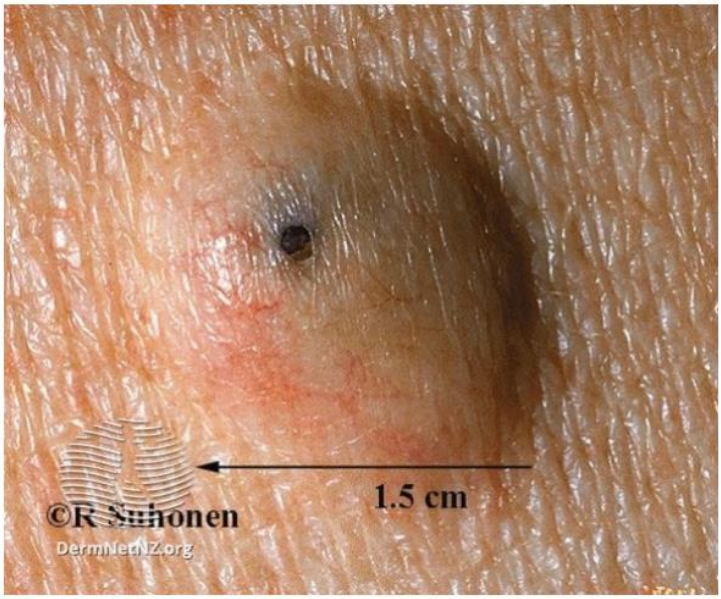
- ***Examination***
  - *Ensure good lighting and privacy.*
  - *Ask the patient to nominate all spots that they (or their partner, friend, or family member) are concerned about.*
  - *Examine:*
    - *all body parts, including non-sun exposed areas, e.g. feet, between toes, area covered by underwear.*
    - *every lesion in turn, paying particular attention to any new or patient-nominated lesions.*

- ***Suggested framework for conducting skin checks***
  1. *Have patient sit in the centre of the couch and examine hands, arms, and face.*
  2. *Ask patient to lie face down to examine their back, legs, and soles of feet.*
  3. *Ask patient to roll over to examine chest, abdomen, legs, and feet (including between toes).*
  4. *Ask about lesions of concern on the scalp or those concealed by underwear. Only examine these areas with verbal consent from the patient.*

3. Check for pigmentation in every suspicious lesion. If there are any pigmented lesions of concern, follow the Suspected Melanoma steps to determine likelihood of melanoma and whether excision biopsy is required.

4. Assess clinical features and characteristics to determine type of lesion/s:

➢ **Benign:**
- ***Epidermoid cysts***
  - *Present as a firm or fluctuant skin-coloured nodule.*
  - *Range from 1 to 50 mm in diameter.*
  - *Tethered to the epidermis, but mobile within the dermal layer.*
  - *A punctum may be seen sometimes with a dark keration plug.*
  - *May become inflamed due to rupture of keratin contents into surrounding tissues, or occasionally become infected (furuncle).*



Epidermoid cyst
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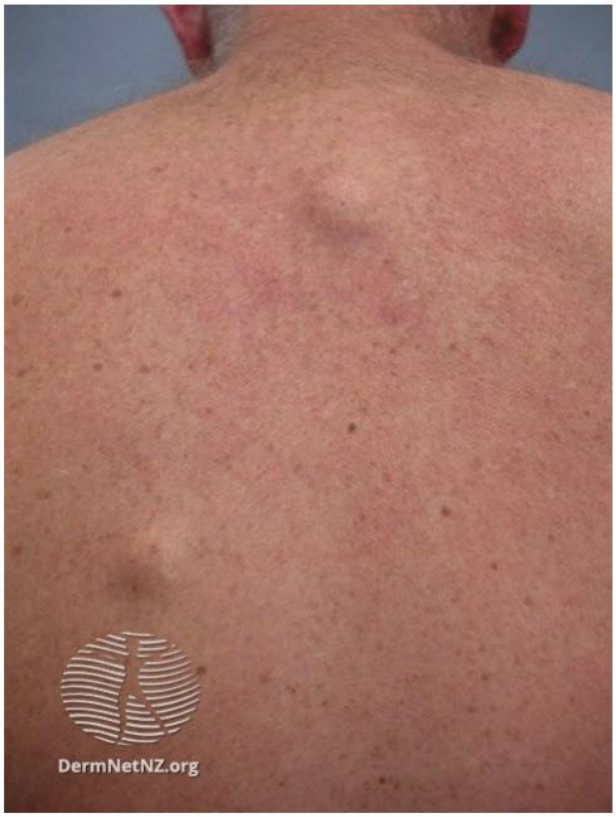

Cyst
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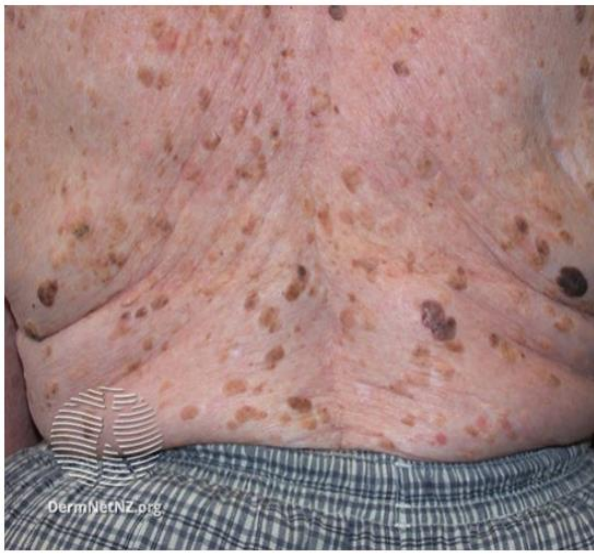
- ***Seborrhoeic keratosis***
  - *Most commonly presents as a "stuck on", well-demarcated, warty plaque. May be raised, flat, or pedunculated.*
  - *Colour varies from skin-coloured to dark brown.*
  - *Can be very large and unsightly.*
  - *Frequently itchy.*
  - *Can mimic melanoma (sometimes difficult to differentiate with dermatoscope) or SCC when severely irritated or traumatised.*



Seborrhoeic keratosis
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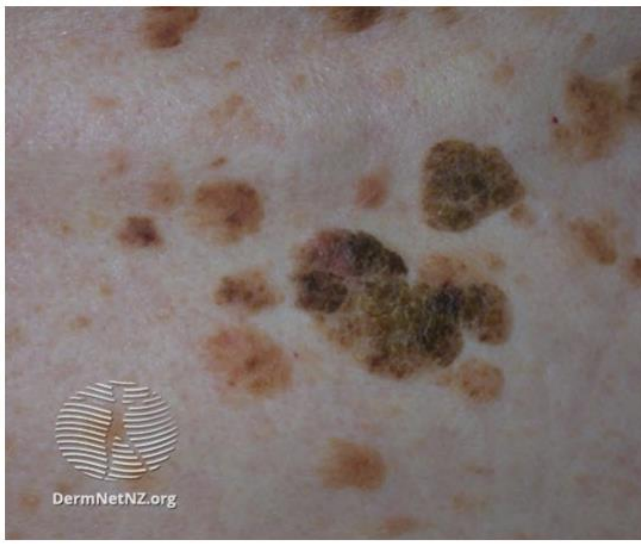

Seborrhoeic keratosis
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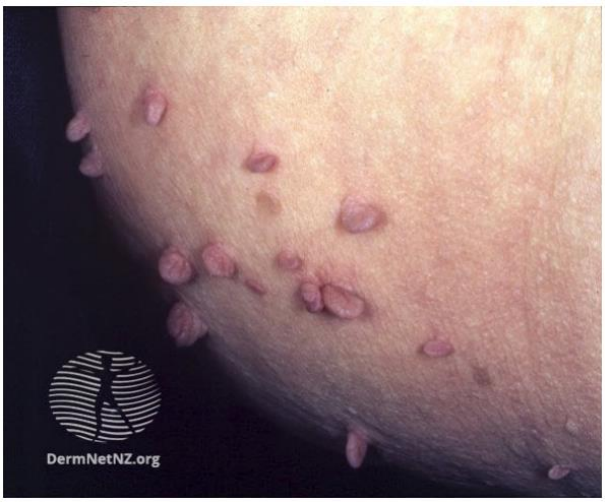
- ***Skin tags***
  - *Painless, skin-coloured, or pigmented non-cancerous pedunculated growths.*
  - *Vary in size from 1 mm to several millimetres.*
  - *Generally occur in flexural areas where there is increased skin-to-skin friction e.g., axilla, neck, groin.*
  - *More numerous in obesity.*



Skin tags Copyright 2018
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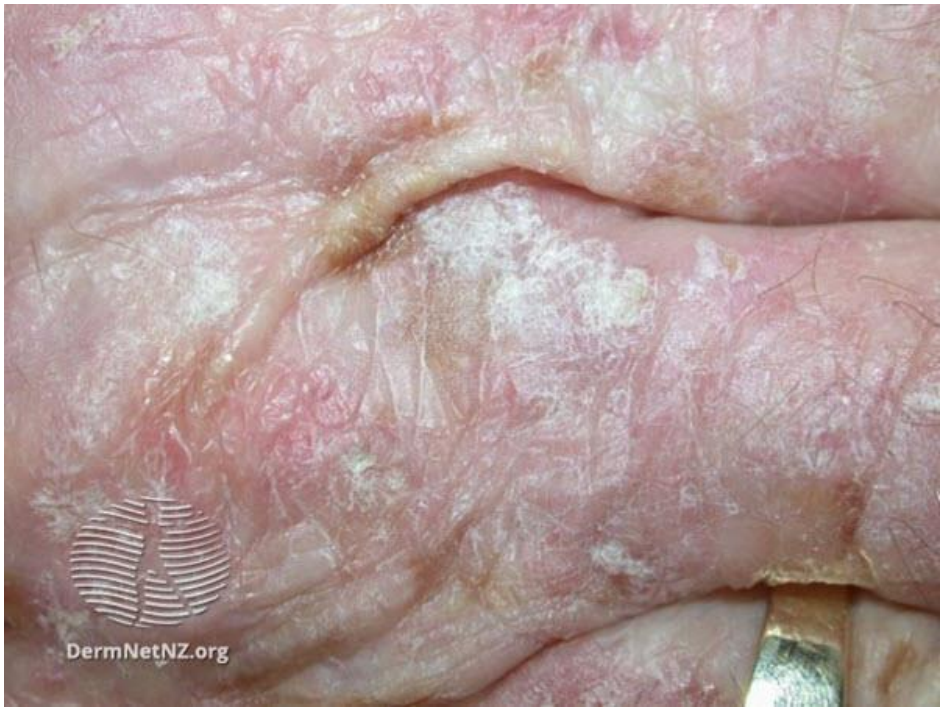
➢ ***Premalignant –***
- ***Actinic keratosis***
  - *Found on sun-exposed sites, most commonly on scalp, face, ears, dorsa hands, forearms, chest, shoulders, legs, and dorsa feet.*
  - *Can be solitary or few in number, but affected patients are most likely to have multiple lesions.*
  - *Variable appearance including:*
  - *flat or thickened plaques with overlying white or yellow scale, or horny surface.*
    - *skin-coloured, erythematous, or pigmented.*
    - *tender, itchy, or asymptomatic.*

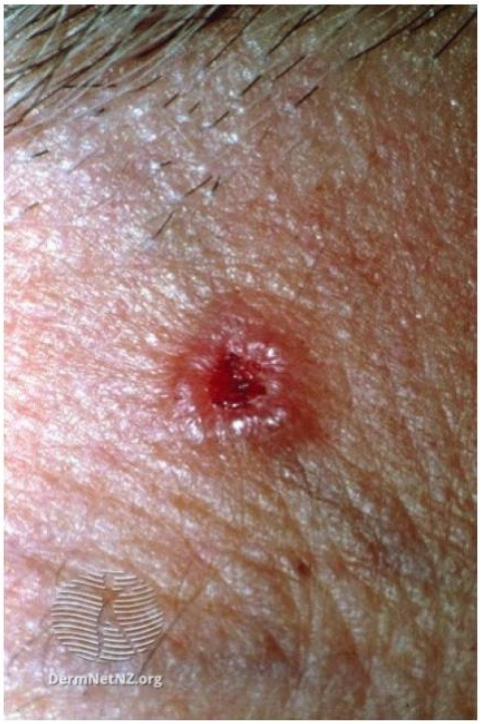


Actinic keratosis

- **Malignant:**
  - ***Basal cell carcinoma (BCC)***
    Characteristics can include:
    - *non-healing ulcer.*
    - *slow-growing plaque or nodule.*
    - *usually pink or variably pigmented.*
    - *varies in size from a few millimetres to several centimetres in diameter.*
    - *easy bleeding.*

There are 4 main clinical presentations of BCC:

- ***Nodular*** *(shiny, translucent, telangiectatic papule or nodule – may be ulcerated)*



Nodular basal cell carcinoma
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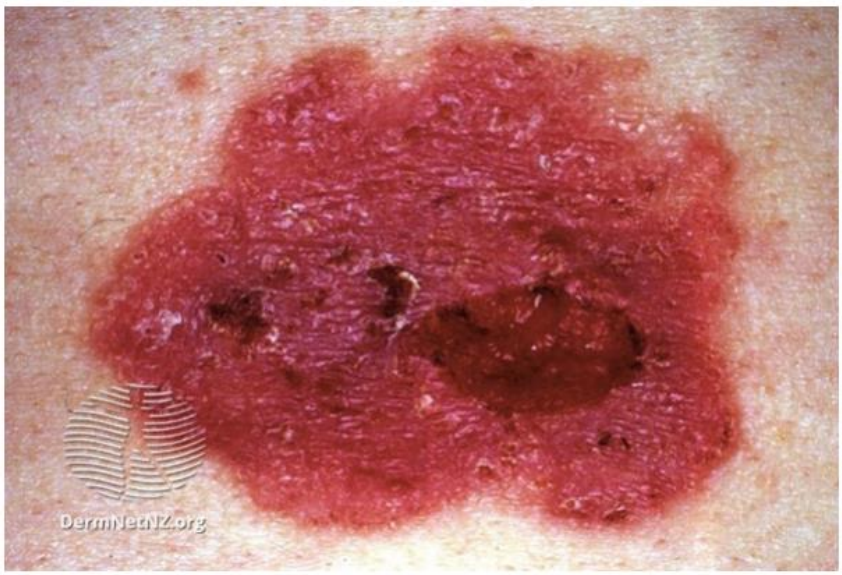
- ***Superficial*** *(usually erythematous, slightly scaly, irregular, with or without an obvious margin or superficial ulceration)*



Basal cell carcinoma
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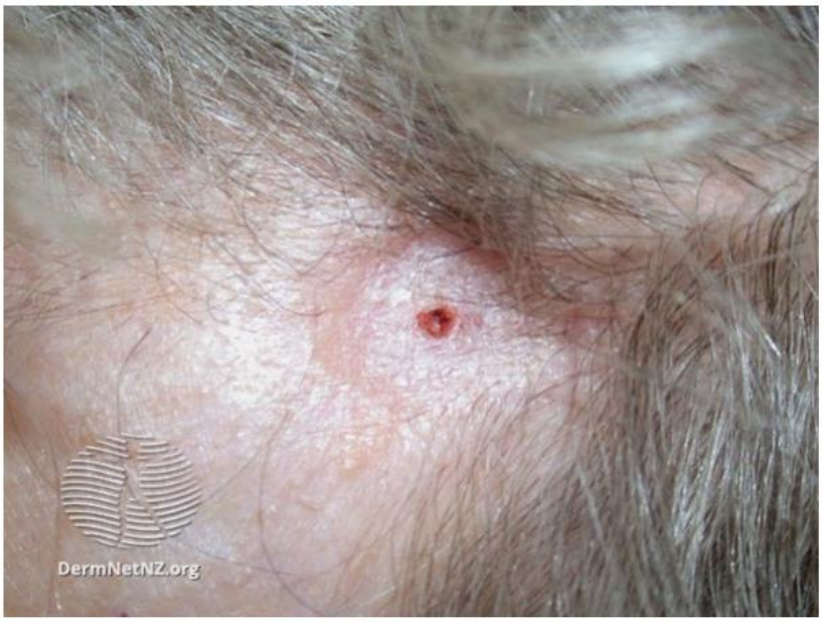
- ***Morphoeic*** *(pale, scar-like lesion – more visible when skin is stretched or presents as an indented scar without prior injury)*



Morphoeic basal cell carcinoma

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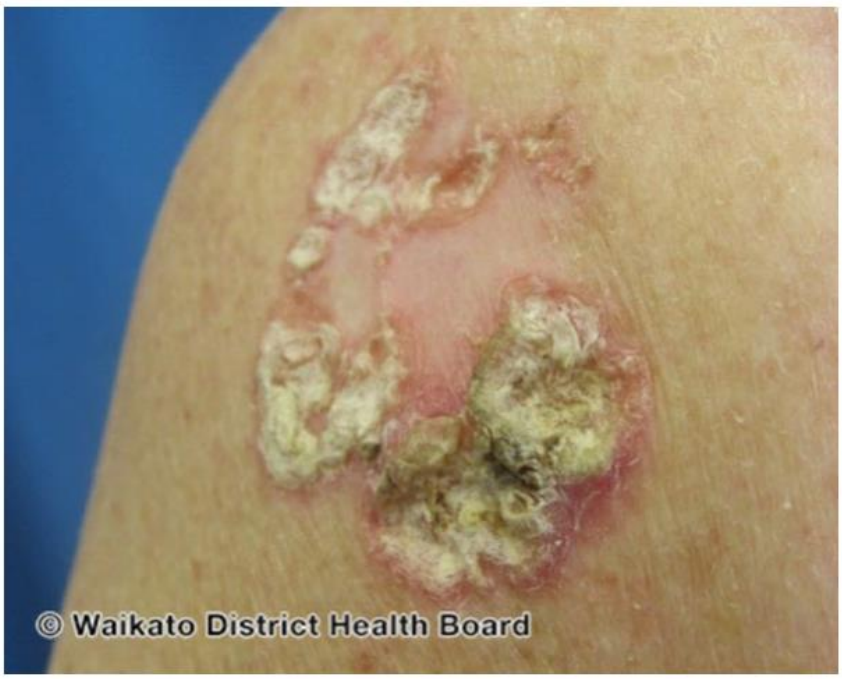
- ***Basisquamous*** *(mixture of both SCC and BCC, and may have clinical features of both cancers i.e., scaly and nodular erythematous plaques)*



Basisquamous cell carcinoma

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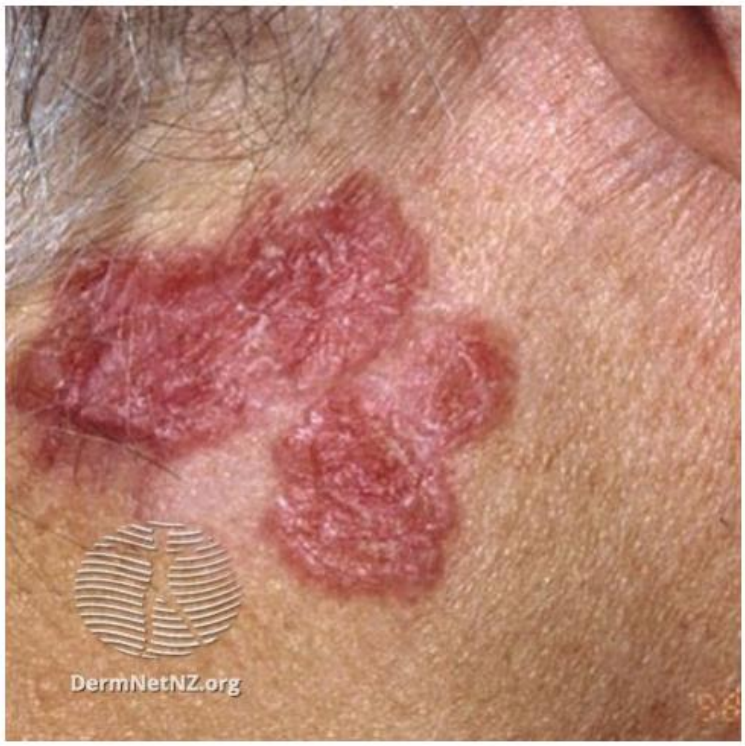
BCC is *very rarely a threat to life. A tiny proportion of BCCs grow rapidly, invade deeply, or metastasise to local lymph nodes.*

See *also Cancer Council – Basal Cell Carcinoma*

- ***Squamous cell carcinoma (SCC)***
  There are 3 main clinical presentations of SCC:
  - ***Classic (****variable appearance e.g., nodular, keratotic, scaly, indurated, tender, and ulcerated)*



Facial squamous cell carcinoma
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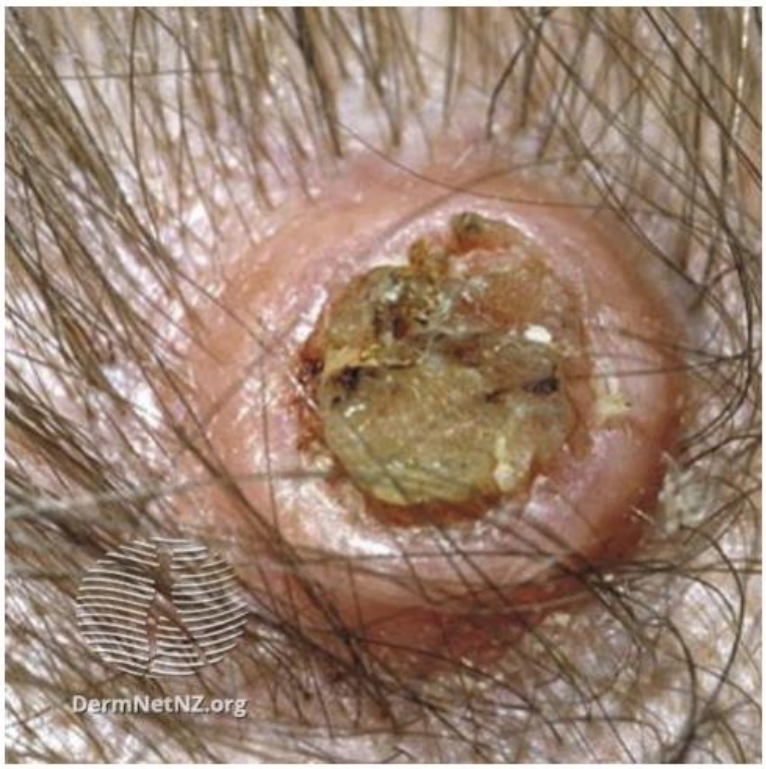
  - ***Keratoacanthoma*** *(tender, rapidly growing lesions, often with a smooth outer dome and central keratin core)*



Keratoacanthoma
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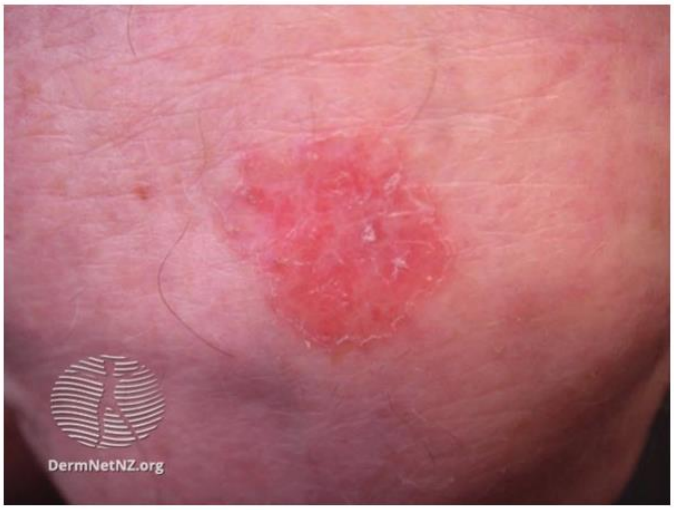
- ***SCC in situ*** *(also known as intraepidermal SCC or Bowen's disease – slowly expanding, irregular, scaly, and erythematous patch; may also contain pigment)*



In situ squamous cell carcinoma
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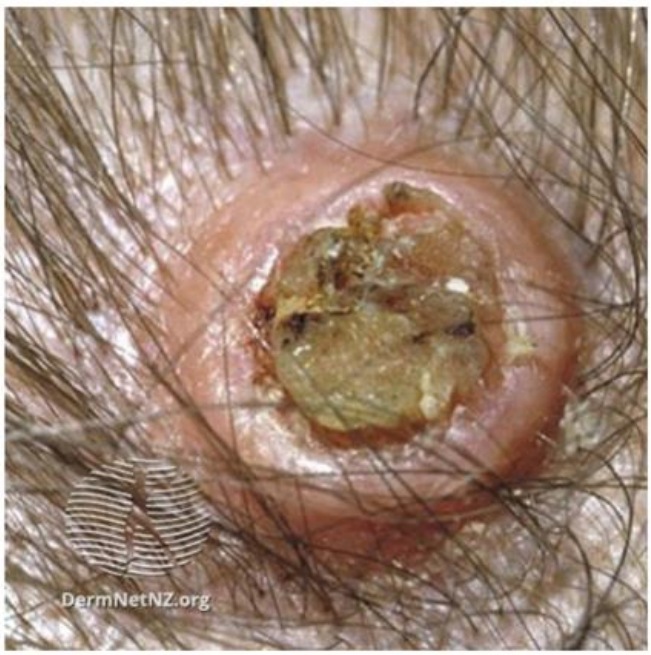
See also Skin Cancer Foundation – Cutaneous Squamous Cell Carcinoma (SCC).

If any suspicion of BCC or SCC, follow the Suspected Melanoma pathway.

- ***Keratoacanthoma***
  - *Regarded as a well-differentiated SCC, but often difficult to differentiate clinically from other variants of SCC. For this reason, it requires surgical treatment and accurate histological evaluation.*
  - *Classically a rapidly growing lesion in sun-exposed sites with a smooth outer dome and central keratin core.*
  - *Can be painful.*
  - *May go through a rapid growth phase followed by maturation and eventual involution leaving a scar.*

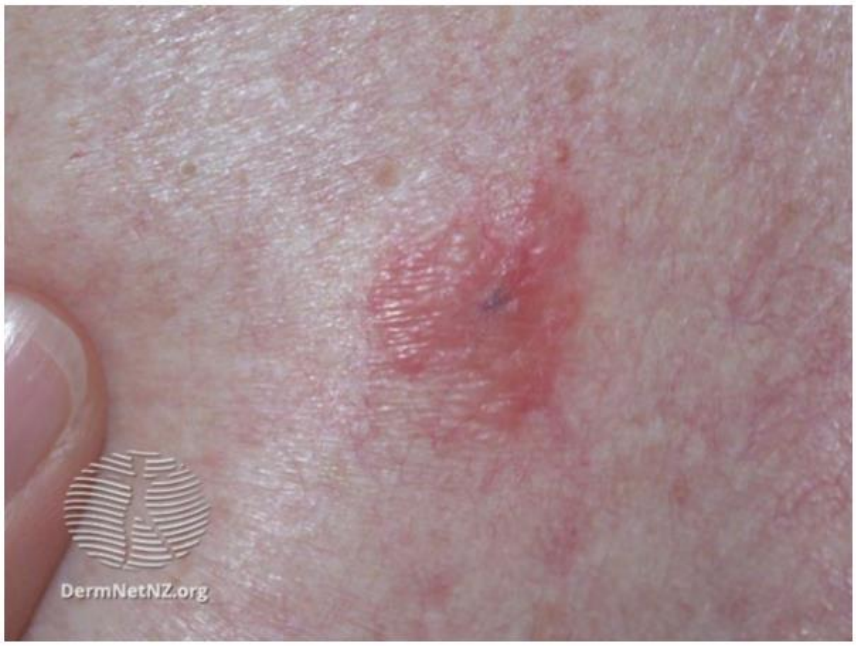


Keratoacanthoma Copyright 2018 DermNet NZ

- ***Amelanotic and hypomelanotic melanoma*** *– if any suspicion of amelanotic and hypomelanotic melanoma, follow the Suspected Melanoma pathway.*

Amelanotic and hypomelanotic melanoma

- *Often not recognised as melanoma because of the absence of pigmentation.*
  - *Up to 20% of all melanomas are only partially pigmented.*[3]
  - *Over one third of nodular, desmoplastic, and acral melanomas are hypomelanotic.*
  - *This stresses the importance of obtaining a histological diagnosis for all suspicious lesions.*
- *EFG rule – consider any lesion that is elevated, firm, and growing over a period of 4 to 6 weeks suspicious for melanoma, even if non-pigmented.*



Melanoma

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5. Consider punch or shave biopsy to confirm pathology if:
   - uncertain of diagnosis, or
   - considering topical treatment.

   Note that a shave biopsy can distort the clinical architecture which can be a problem for future definitive management.

Management

Premalignant lesions (actinic keratoses)

1. Consider **treatment indications**.

   ➢ ***Treatment indications***
   - *Cosmetic appearance*
   - *Symptom relief*
   - *Prevention of skin cancer:*
     - *In a patient with > 10 actinic keratoses, the risk of SCC developing at some stage is 10 to 15%.*
     - *It is not possible to predict which lesions will progress – consider treating all actinic keratoses.*

2. Consider **treatment options**:

   - ***Cryotherapy*** is cheap, effective, and often successful.
     - *Freezing with liquid nitrogen may cause blistering, and should cause shedding of the sun-damaged skin.*
     - *Precautions – if the patient is older, consider whether cryotherapy on lower legs is appropriate because of slow healing, poor circulation, and thin skin.*
     - *Common side-effects:*
       - *A light freeze usually leaves no scar, but longer freeze times (necessary for thicker lesions or early skin cancers) cause a pale mark or scar.*
       - *Keratoses treated will peel off after a week or more.*
     - *Instructions for use – maintain freeze until lesion frosts.*
     - *Recurrence – if lesion recurs, consider alternate intervention and possible biopsy.*

   - **Topical field treatments** can treat lesions that are not clinically visible:

     - ***5-Fluorouracil (Efudix)*** – useful for widespread changes.
       - *Efficacy in treatment of actinic keratoses:*
         - *Complete clearance of lesions in 50% of patients.*
         - *Reduction in mean lesion count in 80% of patients.*
         - *Repeat treatments may be necessary after a few years.*
       - *Contraindications:*
         - *DPD enzyme deficiency*
         - *Pregnancy and breastfeeding*
       - *Precautions:*
         - *Care with ultraviolet exposure on applied sites as this can produce a diffuse phototoxic response. Consider treating in winter if feasible.*
         - *Avoid contact with mucous membranes, perioral, or nasolabial areas.*
         - *Thickened lesions are unlikely to clear and other intervention may be required e.g., cryotherapy, curette, or excision.*
         - *The total surface area treated with fluorouracil at any time should not exceed 23cm by 23cm. If larger areas require treatment, treat in sections.*
       - *Common side-effects:*
         - *Treated areas become erythematous, eroded, and uncomfortable from weeks 2 to 3.*
         - *Healing starts when the cream is discontinued, and may take up to 2 to 4 weeks.*
       - *Instructions for use: Advise patient to:*
         - *apply once or twice a day for 3 weeks.*
         - *ensure treated areas are protected from ultraviolet exposure during treatment.*
       - *If a first-time user, review response to therapy at 2 weeks.*
         - *If intense reaction, consider dose reduction or stopping treatment.*
         - *If nil reaction, switch to alternate treatment option, but check adherence to instructions first.*
         - *Review 3 months after treatment completed.*
       - *See also:*
         - *PBS : Fluorouracil 5% cream is available on the Repatriation PBS.*
         - *TGA:*
           - *Fluorouracil Product Information*
           - *Consumer Medicine Information*
         - *DermNet NZ – Fluorouracil Cream*

     - ***Imiquimod (Aldara)*** – second-line option.
       - *Efficacy:*

        - *Complete clearance rates – 48 to 57%*
        - *Partial (> 75%) clearance rate – 64 to 72%*
    - *Contraindications:*
        - *Lesions with marked hyperkeratosis or hypertrophy e.g., cutaneous horns*
        - *Lesion/s within 1 cm of hairline, eyes, ears, nose, or lips*
        - *Patients who are immunosuppressed e.g., HIV positive, abnormal blood count, on immunosuppressive medications*
        - *Lesions previously treated with Imiquimod and failed to clear*
        - *Pregnancy and breastfeeding*
    - *Common side-effects:*
        - *Local skin reactions may last for up to 4 to 8 weeks*
        - *Flu-like symptoms*
        - *Post-inflammatory hypopigmentation*
    - *Instructions for use:*
        - *Advise patient to:*
            - *Apply at night, then wash treated area in the morning with mild soap and water.*
            - *Usually apply 3 times a week to skin lesion for 4 to 6 weeks.*
        - *Assess response at 2 weeks if first-time user.*
        - *Consider dose reduction if an intense reaction occurs.*
        - *Review 1 month after treatment.*
            - *If nil reaction, switch to alternate treatment option.*
            - *If lesions persist, repeat 4- to 6-week course – maximum 2 courses.*
    - *See also:*
        - *PBS – Imiquimod. PBS authority required.*
        - *TGA:*
            - *Product Information*
            - *Consumer Medicine Information*
        - *DermNet NZ – Imiquimod (Aldara)*

- ***Ingenol mebutate (Picato)*** – more expensive option with faster recovery times than 5-fluorouracil and imiquimod.
    - *Efficacy:*
        - *Face and scalp:*
            - *Complete clearance rate – 42.2%*
            - *Partial clearance rate (> 75%) in 63.9% of patients*
        - *Trunk and extremities:*
        - *Complete clearance rate – 34.1%*
        - *Partial clearance rate (> 75%) in 49% of patients*
    - *Contraindications:*
        - *Hypersensitivity to ingenol mebutate or any constituent of Picato gel*
        - *Pregnancy*
    - *Precautions:*
        - *Ultraviolet protection is required for treated areas.*
        - *Avoid periocular or perioral areas and mucous membranes.*
    - *Common side-effects – local skin reactions including erythema, swelling, crusting, and blistering.*
    - *Instructions for use:*
        - *Body – 0.05% gel, patient applies daily to affected skin for 2 days.*
        - *Scalp – 0.015% gel, patient applies daily to affected skin for 3 days.*
        - *Assess for response 8 weeks after treatment.*

- *Treat no more than 10 cm squared in one course.*

See also:
- *PBS – Ingenol mebutate. Repatriation PBS authority required.*
- *TGA – Consumer Medicine Information (0.05% Gel)*
- *DermNet NZ – Ingenol Mebutate Gel*

Topical field treatments can cause extensive local skin reactions – consider requesting urgent or routine dermatology referral to guide patients through the first course of treatment.

➢ Photodynamic therapy (PDT) or daylight PDT – request urgent or routine dermatology referral. This is now done as topical therapy with either an artificial light source or a much more comfortable method using daylight.

3. If patient is an organ transplant recipient, request urgent or routine dermatology referral for surveillance. See also DermNet NZ – Skin Cancer in Transplant Recipients.

Benign lesions (epidermoid cysts, seborrhoeic keratoses, skin tags)

1. If non-symptomatic and the patient has no aesthetic concerns, reassure the patient that no treatment is necessary.
2. If a benign lesion is causing at least moderate reduction in quality of life (QOL) (e.g., a perceived inability to work or go out), consider treatment.
   - Epidermoid (sebaceous) cyst – if affecting QOL or there is a risk of infection or perforation, consider **excision.**
     - ***Excision technique***
       1. *Do not excise inflamed/infected cysts.*
          - *If not obviously infected, treat with intralesional steroid to reduce inflammation.*
          - *If infected, prescribe antibiotics. If incised and drained, it will heal with a scar and be difficult to excise in future due to fibrous tissue formation.*
          - *Allow inflammation to settle prior to proceeding to cyst removal if it is still necessary. This may take up to 3 to 4 weeks.*
       2. *Discuss **risks** and obtain appropriate consent.*
          Excision risks
          - *Recurrence of cyst after removal*
          - *Scarring e.g. hypertrophic, keloid, hypopigmented, stretch scars*
          - *Bleeding*
          - *Infection*
          - *Poor wound healing*
          - *Numbness and nerve damage (motor or sensory)*
          - *Contour abnormality*
          - *Asymmetry*
          - *Disturbance of free margins e.g., eyelid, lips, nasal alar*
       3. *Don personal protective equipment e.g., masks and eye protection.*
       4. *Clean the area, anaesthetise the skin overlying and beside the cyst with 1% lignocaine.*
       5. *Remove the cyst intact with an ellipse of skin overlying the cyst. To minimise the risk of recurrence or unsightly scarring, it is important to remove all of the cyst wall (shell it out) without spilling any contents, as this will cause a nidus for recurrence.*

6. *When all of the cyst wall has been removed, the opening may be closed with sutures. A large cyst will leave some dead space which needs to be closed adequately in order to avoid possible haematoma formation e.g., either with subcutaneous sutures and/or a pressure dressing.*

- Seborrhoeic keratosis and skin tags or polyps can usually be diagnosed clinically and do not generally require excision to exclude malignancy.
  - If in doubt, consider asking a colleague for an opinion before performing an excision.
  - Consider **treatment** if needed.
    If ***treatment*** *is needed:*
    - *Shave biopsy is preferable to cryotherapy as it allows for histological confirmation of diagnosis.*
    - *Also consider cryotherapy, or curettage and cautery.*

    See DermNet *NZ – Seborrhoeic Keratosis.*

If removal of lesion is indicated but is not possible in general practice, consider request as appropriate for the location of the lesion:

- urgent or routine dermatology referral
- urgent or routine general surgery referral
- urgent or routine plastic surgery referral

Referral

- Request urgent or routine dermatology referral for actinic keratosis management if:
  - seeking photodynamic therapy (PDT).
  - not confident in prescribing topical field treatments.
  - patient needs guidance through the first course of topical field treatment.
  - patient is an organ transplant recipient.
- If a benign lesion is causing at least moderate reduction in quality of life (QOL), and general practice removal is not possible, consider request for assessment as appropriate:
  - urgent or routine dermatology referral
  - urgent or routine general surgery referral
  - urgent or routine plastic surgery referral

Information

For health professionals

- Australasian College of Dermatologists – A to Z of Skin
- DermNet NZ – Common Skin Lesions
- RACGP – Skin Checks

For patients

- Better Health Channel – Removing Benign Skin Lesions
- Cancer Council – Checking for Cancer: What to Expect
- Cancer Council Victoria – Aboriginal Communities: Information
- National Indigenous Cancer Network – About Cancer

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