Management of Eczema in the Community

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Learning Objectives

- To be able to differentiate between various clinical presentations of eczema
- To understand a systematic approach to managing eczema in the community
- To understand basic principles of eczema treatment
- When to refer?

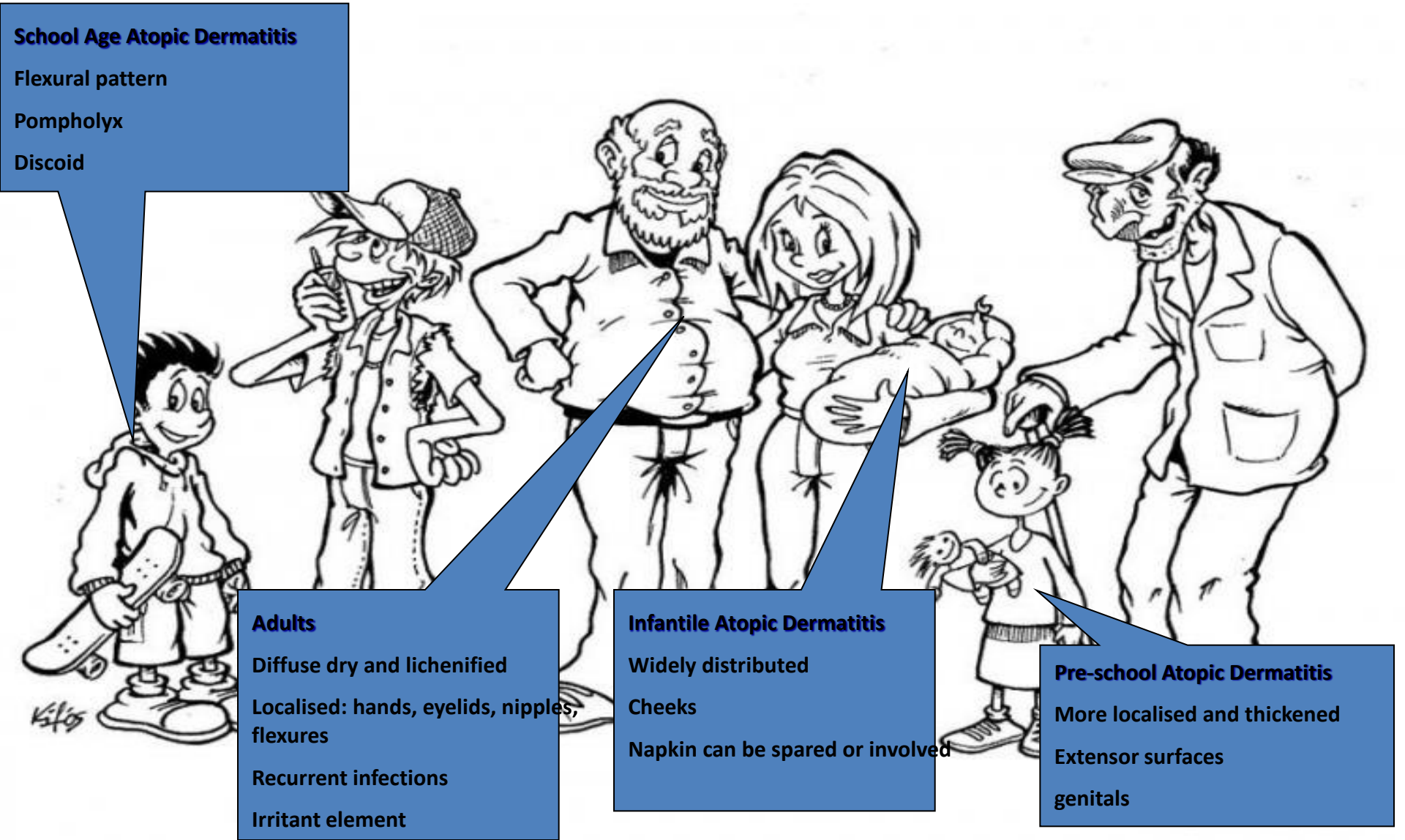
Types of Eczema

Atopic Eczema	Children, inherited factors important, FH atopy
Irritant Contact Dermatitis	Provoked washing, detergents, chemicals, friction
Allergic Contact Dermatitis	True type IV reaction to contact with substances
Discoid Eczema	Annular lesions stubborn to treat
Seborrhoeic Dermatitis	Irritation possibly to Malassezia yeasts
Stasis Eczema	Secondary to oedema and poor venous drainage

Atopic Eczema

- Affects 15-20% school-age children but 2-10% adults
- 80% mild disease, 2-4% severe
- Unusual before age 4 months, onset usually before 2 yrs age
  - Teething
- ‘Terrible two’s’ often severe between ages 1-4 yrs
- 60% children clear by teens

What does atopic eczema look like?



Inherited Barrier Defect

- Abnormal filaggrin expression
- Filament associated proteins bind to keratin fibres in epidermal cells
- Loss of filaggrin causes:
  - Corneocyte deformation
  - Reduction natural moisturising factors
  - Increase in skin pH

Management

- Education
- Cleansing
- Emollients
- (Antihistamines)
- Topical Steroids
- Calcineurin inhibitors

Education

- Information sheets
- Personalised treatment plans
    - Make it fun, keep diary etc
- Nursing involvement
    - Provide care plans
- Avoid irritants and exacerbating factors
    - Soap/shampoos
    - Clothes and bedding
    - Detergents/fabric softeners
    - House dust mite avoidance /animal dander
    - ?food allergies
    - Scratching (consider occlusion) –'habit reversal'
  - Secondary infection:
    - Staphylococcal
    - Eczema herpeticum

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CARE PLAN FOR Eczema

Name: _____

Date of birth: _____

Doctor: _____

Date: _____

Having eczema means your skin is lacking the particular body substances that usually keep skin supple and intact. When damaged, moisture evaporates from the skin, cells shrink and cause cracks. Allergens and irritants can get in, triggering your skin to release certain chemicals that make your skin feel itchy. If you scratch, more chemicals are released and the itchier your skin feels. This '***scratch and itch cycle***' is most distressing.

HOW THIS PLAN CAN HELP YOU

Whilst there is no cure for eczema, it is possible to moisturise and create a barrier on the surface to keep the added moisture in and the irritants and triggers out. This plan aims to provide strategies to keep your or your child's skin in the best condition possible.

BATHING & SHOWERING

Any product that bubbles is trouble (J. Carr 2006). Avoid using soap or soap based products that can thin and dry the skin. Use non-soap based products (bath oils, body washes) that cleanse the skin by helping dirt stick to the product, which is then rinsed off. If you like to use soap on hairy parts of the body, try to use a cleansing bar, but rinse off thoroughly and avoid using it on less hairy skin areas. Non-soap products are mostly available from pharmacies, not supermarkets. Cosmetic body washes are NOT recommended. **Your skin does not have to feel dry and tight to be 'clean'.**

MOISTURISING

By including effective moisturising into part of your daily routine you will usually find your skin flares less often, the flares may be less severe and you are less prone to infection. It is up to you to maintain this. *It is like a car - if you let servicing and maintenance slip the car will falter. It is the same with your skin.*

INFECTION

Infection is a common trigger for eczema flares. As damaged skin has a greater chance of becoming infected, it is important to watch for signs of infection, such as redness, weeping sores and/or yellowish crusted sores on the skin. If infected seek antibiotic treatment, prescribed by your doctor, as soon as possible.
Extra care is needed if a person with eczema is around someone with **cold sores**, caused by the herpes simplex virus (HSV), which can infect damaged skin, cause blistering and make you very unwell. Seek medical help immediately, if you suspect this infection, as it can be treated with antiviral medication.
Molluscum contagiosum is a warty looking virus commonly occurring in children including those with eczema. Scratching will spread the infection. Although it can be distressing, it will disappear over time without treatment.
When **Chicken Pox** appear, eczema often improves. After the infectious period has passed and scabs appear, eczema often returns, so use your skin care routine to restore moisture.
As **immunisation** tries to fool the body into thinking it has an infection, eczema may flare. However it is very important to have immunisations on the correct schedules. You should always tell your doctor that you have eczema before any immunisations.

THE 3 STEPS FOR ECZEMA SKIN CARE

STEP 1 - MAINTAIN

- Use a non-greasy moisturiser when skin is under control
- Use..... cream..... times daily

Non-greasy creams usually contain glycerine and mineral oils, such as most brands of Sorbolene, QV (Ego), Dermodrate (DermaTech), Hamilton Lotion, Dermaveen Moisture Lotion, Hydraderm, Alpha-keri lotion and Neutrogena moisture creams. Avoid parabens as some people may be sensitive to these.
Suggestion: To help you remember, moisturise at least twice per day, when you clean your teeth.

If skin feels dry or if you need to apply STEP 1 type moisturiser more than 4 times daily, go to STEP 2

STEP 2 - PROTECT & REPAIR

- Use thick creams containing white and/or soft paraffin
- Use.....cream.....times daily or whenever skin feels dry

Thicker creams include QV Cream (Ego), Dermaveen eczema cream, Cetaphil (unless nut allergy diagnosed) and E45 (Boots).
Suggestion: You can use step 2 creams during the day and a greasy cream from step 3 at night within a few minutes after bathing.

If skin feels very dry or if any areas look like they might flare, go to STEP 3

STEP 3 - INTENSIVE TREATMENT

- Use greasy creams containing white and soft paraffin
- Use.....cream.....times daily

Greasy creams include Dermeze (Aspen) and QV Intensive (Ego).

If your doctor has prescribed topical corticosteroid ointments for when your eczema flares to reduce inflammation, use in the amount suggested by your doctor (refer to Action Plan).

.....BODY only
.....FACE only

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ACTION PLAN FOR Eczema

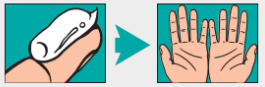
Name: _____

Date of birth: _____

Doctor: _____

Date: _____

Applying corticosteroid ointment for eczema



One finger tip unit (FTU) is the amount of ointment from the first bend in finger to the fingertip.

This will cover an area equal to two adult hands.

Guide to applying corticosteroid ointment in children (3mths-10yrs)

(Babies 0-3 months – as advised by Doctor)

Age	3-6 mths	1-2 yrs	3-5 yrs	6-10 yrs	
Number of FTU's	1	1.5	1.5	2	Face & Neck
	1	1.5	2	2.5	Arm & Hand
	1.5	2	3	4.5	Leg & Foot
	1	2	3	3.5	Trunk (Front)
	1.5	3	3.5	5	Trunk (Back)

References:
Long, Mills, Findlay, British J Derm 1998 (Vol 138, 293-296).
Topical Cortocosteroid Preparations 2007
www.nhsdirect.nhs.uk

ECZEMA UNDER CONTROL

- Skin is soft and supple (not red or itchy)

ACTION: STEP 1 - MAINTAIN

- Moisturise whole of skin area at least 2 times daily with non-greasy cream
- Remove triggers and do not over heat
- Watch for signs of skin becoming red, frequently itchy and dry
- Moisturiser: .....
- Non-soap based wash product: .....

ECZEMA FLARE (MODERATE)

- Skin is itchy, some redness, dryness, flaking

ACTION: STEP 2 - PROTECT & REPAIR

- Apply thick cream to all of skin (contains paraffin or equivalent) during day
- Apply greasy cream at night
- Apply wet wraps at night to protect skin
- Watch for red flares - use prescribed topical corticosteroid ointment on red areas
- May need to use bath oil containing antibacterial preparation
- Watch for signs of infection (weeping, oozing, crusting, pustules, unresponsive eczema, fever or malaise) - may need antibiotic prescribed by doctor
- Moisturiser: day ..... night .....
- Corticostoid ointment: face ..... body .....
- Antibiotic: .....
- Other prescribed medication: .....
- Bath oil or body wash: .....

ECZEMA FLARE (MODERATE TO SEVERE)

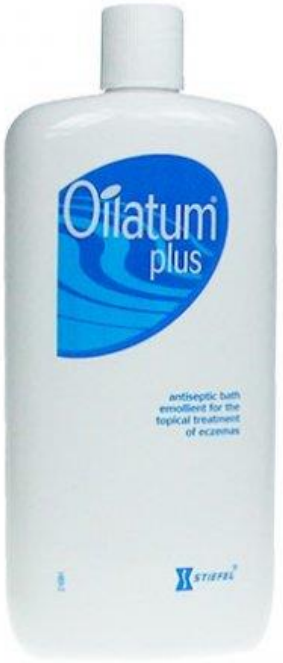
- When eczema is not responding to above treatments

ACTION: STEP 3 - INTENSIVE TREATMENT

- Apply greasy cream to whole of skin at least 3 times daily
- Use wet wraps, unless eczema is infected
- If infected seek medical advice as soon as possible
- Use corticosteroid ointment prescribed by your doctor
- Moisturiser: day ..... night .....
- Corticostoid ointment: face ..... body .....
- Antibiotic: .....
- Other prescribed medication: .....
- Bath oil or body wash: .....

Cleansing

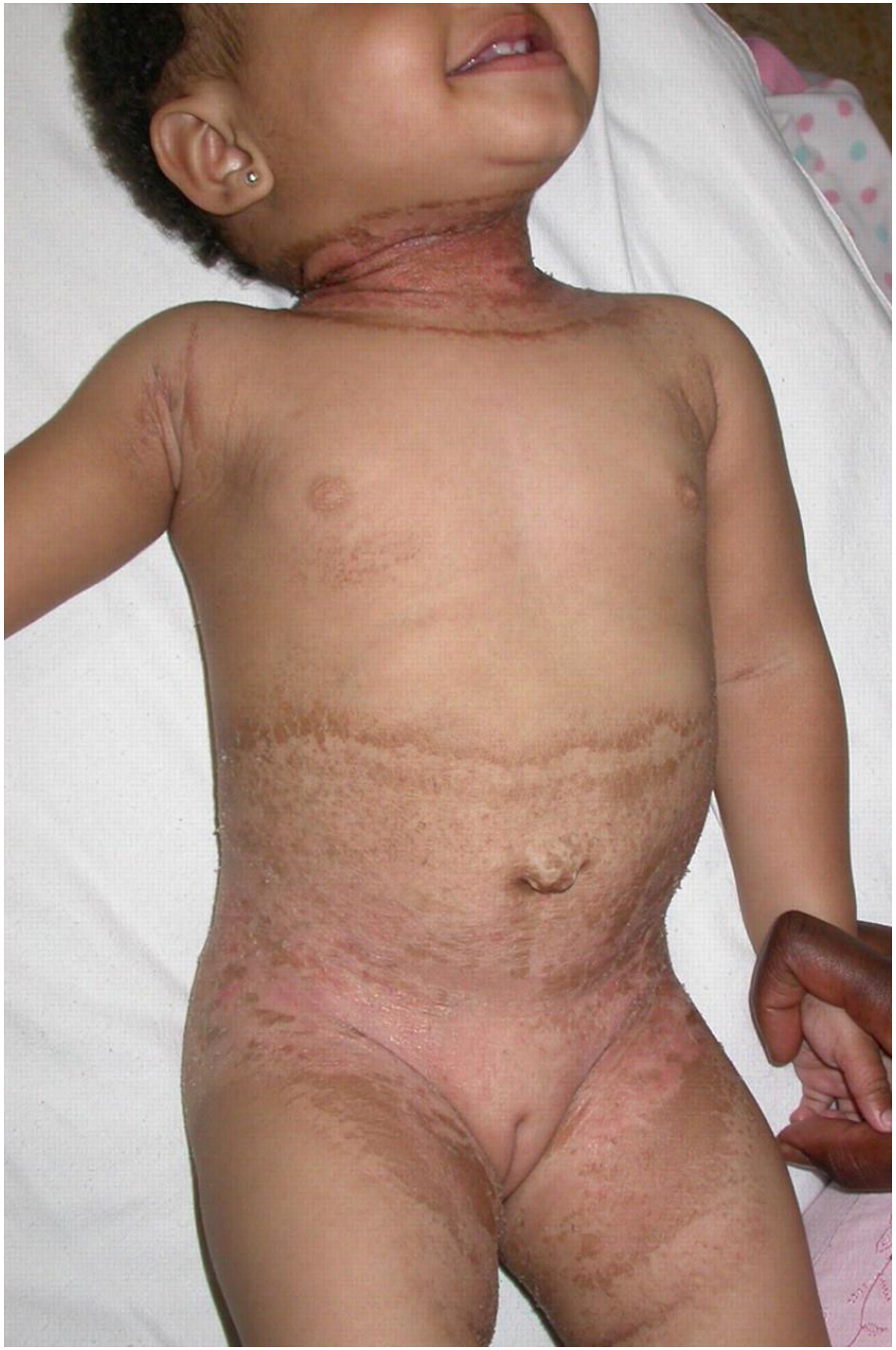
Soap substitute	•Aqueous cream •Hydromol ointment •Epaderm •Emulsifying ointment
Antiseptic soap substitute	•Dermol 500
Bath additive	•Oilatum fragrance free •Diprobath
Antiseptic bath additive	•Dermol 600 •Emulsiderm •Oilatum plus*



Acute irritant reaction to an antiseptic bath emollient

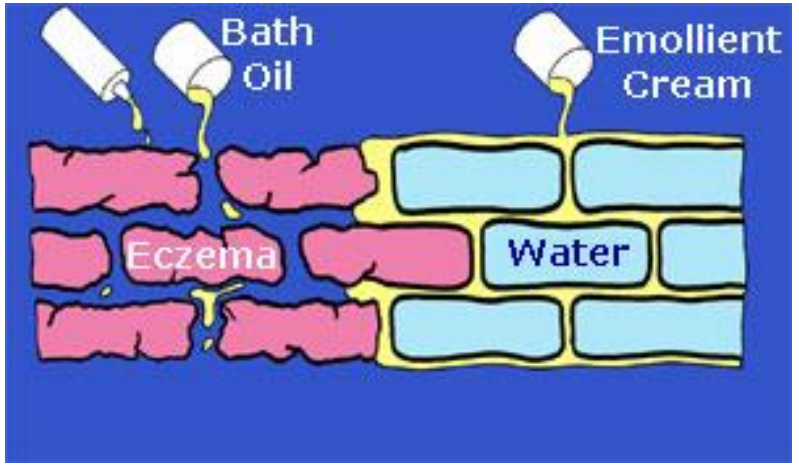
Saw et al

Postgrad Med J 2005;81:131-2



Emollients

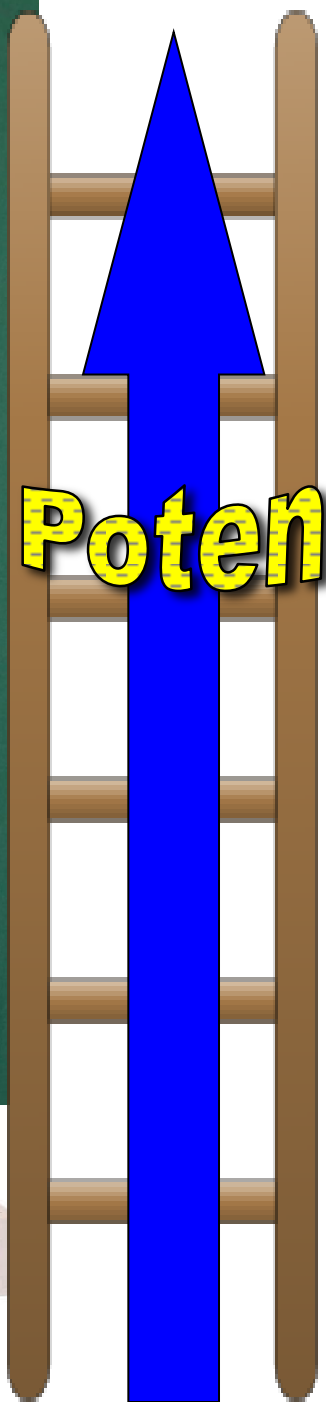
- Patient/parental choice increases compliance
- As liberally and frequently as possible
- Should be prescribed in large quantities:
  - 600g/week in adults
  - 250g/week children
- Using 4 times a day will reduce need for topical steroids by 40%




Greasy
Doublebase
Doublebase
100 g
DiproBase
500g
Cream
EMOLLIENT
Oilatum
cream
Aveeno
AVEENO CREAM
Moisturising Cream with Colloidal Oatmeal
CETRABEN
DERMATOLOGICAL
EMOLLIENT CREAM
Relieves dry skin and eczema
500g
Epaderm
OINTMENT
FOR ECZEMA, PSORIASIS AND OTHER DRY SKIN CONDITIONS
3 in 1 emollient, bath additive and skin cleanser
Epaderm
cream
BELLS
WHITE SOFT PARAFFIN B.P.
Soothes and protects the skin
500g
emollin
50/50
Emollient Spray
DERMATOLOGICAL
E45
Cream
Treatment for Dry Skin Conditions
Dermöl 500
LOTION
500 ml

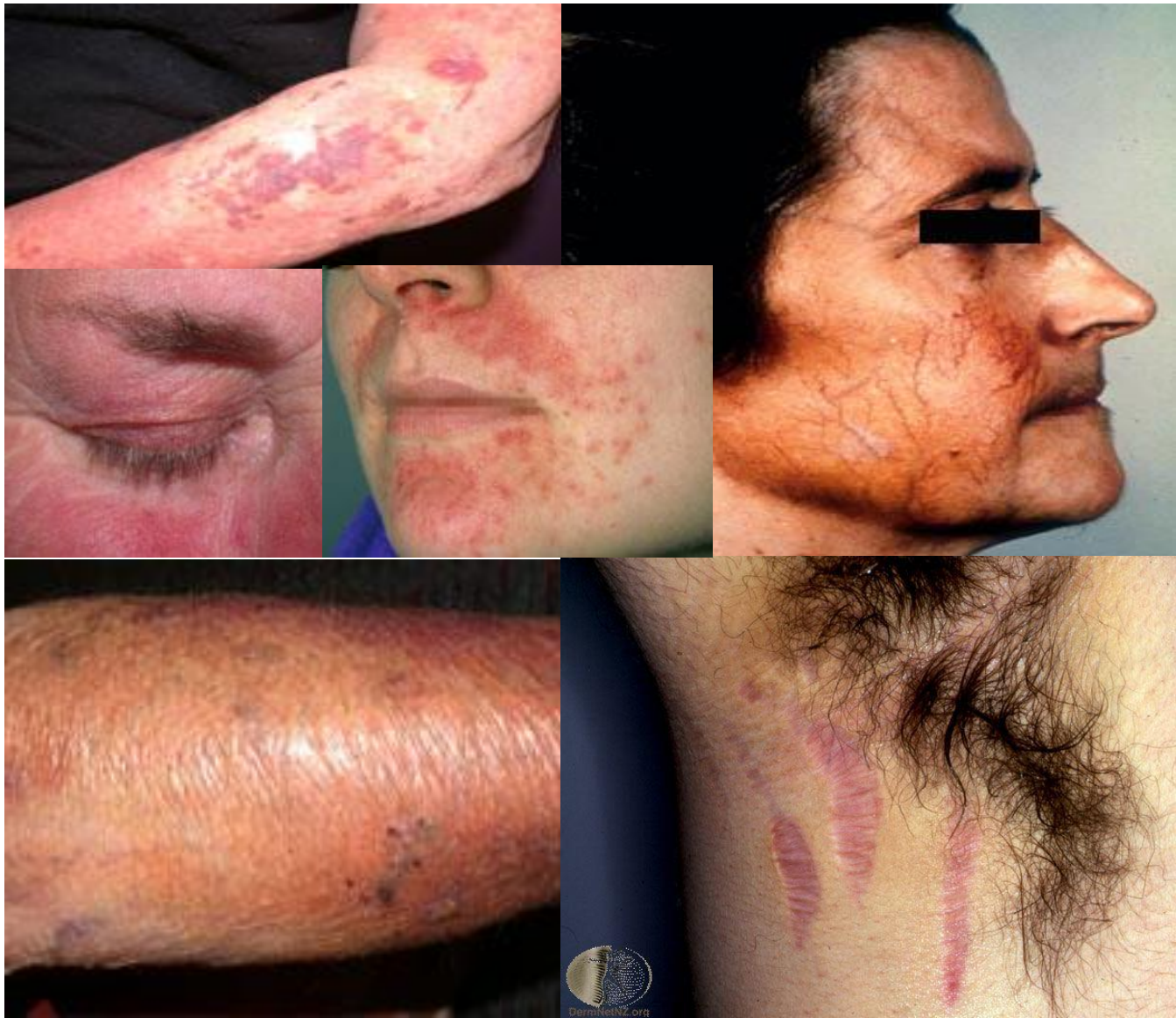
Topical Steroid Treatment

- The weakest steroid that controls the disease effectively
- Regular review of steroid use in terms of potency and quantity essential
- Advise patient how to use and how much
- Keep under review for local and systemic side effects
  - Skin atrophy
  - Tinea incognito
  - Acne or perioral dermatitis



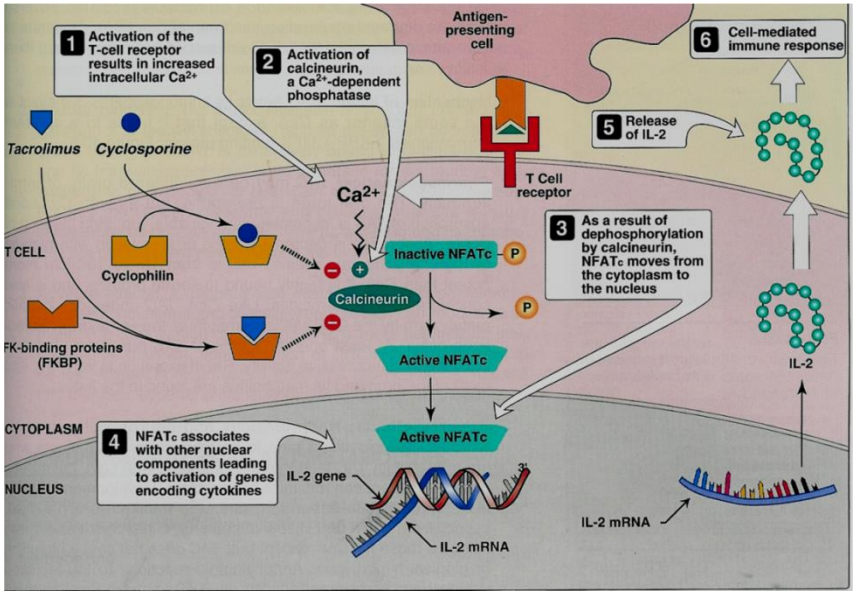
1. Ointment v Cream
2. Tachyphylaxis

Need for therapeutic advances



Topical Immunomodulators

- Topical calcineurin inhibitors
- Suppression of T-cells
- Binds FK-506 binding protein-12, forms complex and blocks calcineurin



Topical Immunomodulators

Topical tacrolimus Ointment

Protopic (Astellas Pharma)
0.03%
0.1%

Equivalent to potent topical steroid

Topical Pimecrolimus Cream

Elidel (Novartis)

Equivalent to hydrocortisone

Guidelines

- Initiated by Dermatologist or GPwSI
- 2nd line mod/severe eczema not controlled by steroids
- Patients at risk of steroid side effects
  - Skin atrophy
- Patients must be informed of potential risks v benefits

- Tacrolimus
  - 2nd line mod/severe eczema
  - Adults (0.1%) and children >2yrs (0.03%)

- Pimecrolimus
  - 2nd line mod/severe eczema face & neck
  - 2-16 yrs

NHS National Institute for Clinical Excellence

Safety data

- Side effects
  - Burning, tingling, pruritus
  - Acne, folliculitis
  - Skin infections
- Long-term risks
  - Theoretical risk skin cancer
- Alternative second line agents
  - Systemic corticosteroids
  - Phototherapy
  - Systemic immunosuppression

Tacrolimus safety data

The safety of tacrolimus ointment for the treatment of atopic dermatitis: a review *M Rustin BJD 2007 157 p861-873*

- Over 14yrs clinical experience
- Low or no systemic absorption after topical application
- Overall long-term use not associated with increased infections
- No evidence increased carcinogenicity in animal studies
- No causal link with malignancy

Our practice

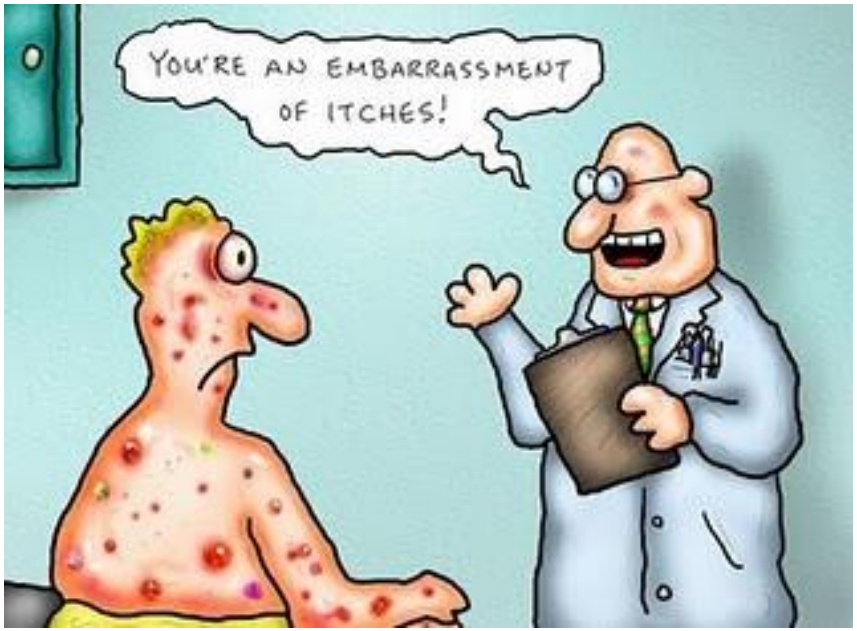
- Practical Hints
  - Be sure of diagnosis
  - Avoid sun exposure
  - Education: Stop if suspect infection
  - Six-monthly review in clinic
  - Maintenance therapy

Clinical Practice

- Off licence uses in hospital practice
  - Vitiligo
  - Seborrheic dermatitis, Contact dermatitis
  - Perioral dermatitis
  - Lichen sclerosus
  - Lichen planus
  - Panniculitis (under occlusion)
  - Granuloma Annulare

We are here to help

- Diagnosis uncertain
- Education
  - application of treatment
  - Compliance issues
- Severe social or psychological problems
  - school absenteeism
- Contact dermatitis is suspected
- CBT ‘Habit Reversal’
- Severe disease not responding to appropriate therapy
  - potent steroids required
- Recurrent secondary bacterial infection
- Eczema Herpeticum suspected (urgent referral)



Questions?

The Sun Damaged Patient

An approach to managing and referring skin lesions

Dr Catherine Borysiewicz
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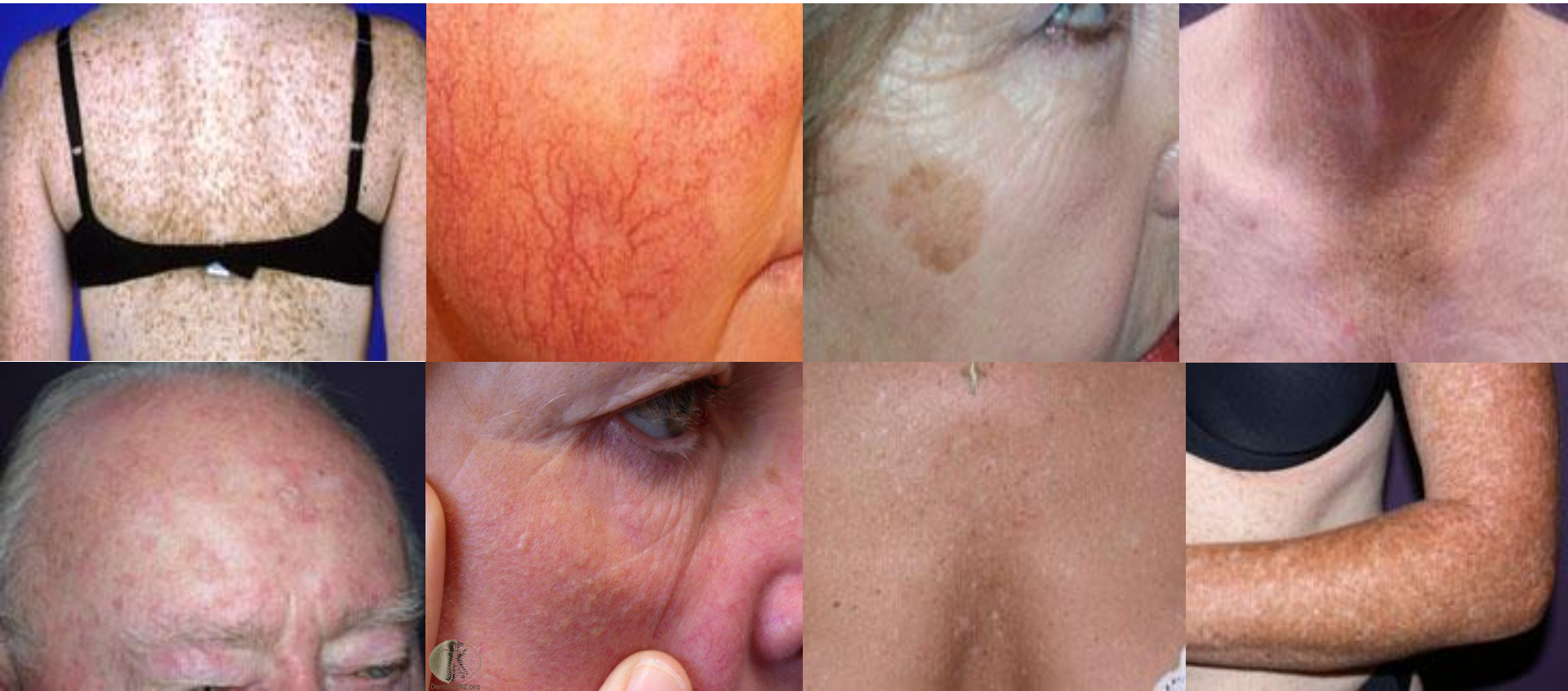
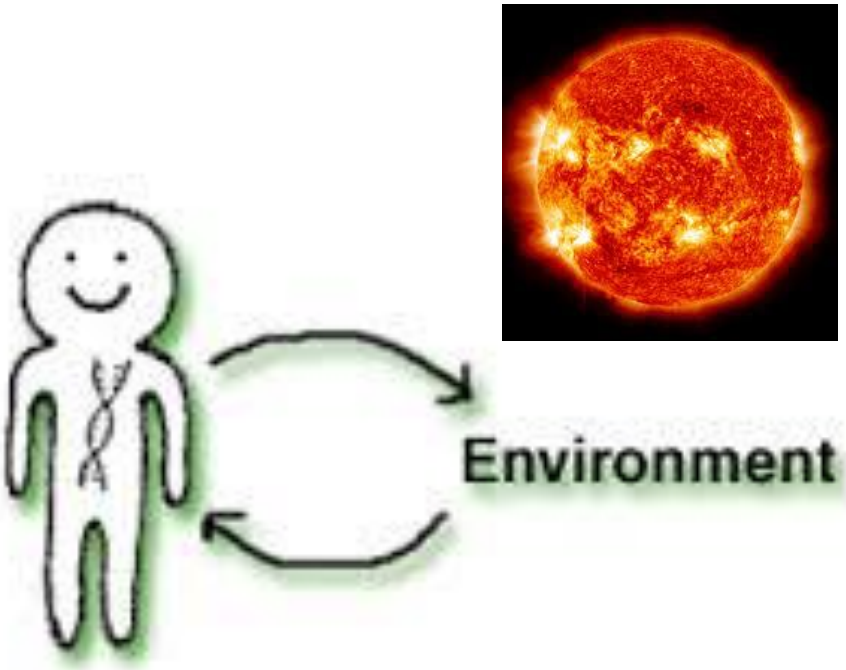
Key Learning Objectives

- Clinical assessment of sun damaged skin
- Sun awareness education
- Approach to managing lesions in the community
  - Actinic keratosis
    - Topical therapies
  - Bowen's disease
  - Common benign lesions
- Lesions to refer into hospital based dermatology
  - Basal cell carcinoma
  - Squamous cell carcinoma
  - Melanoma
    - Mole mapping service

Where to start



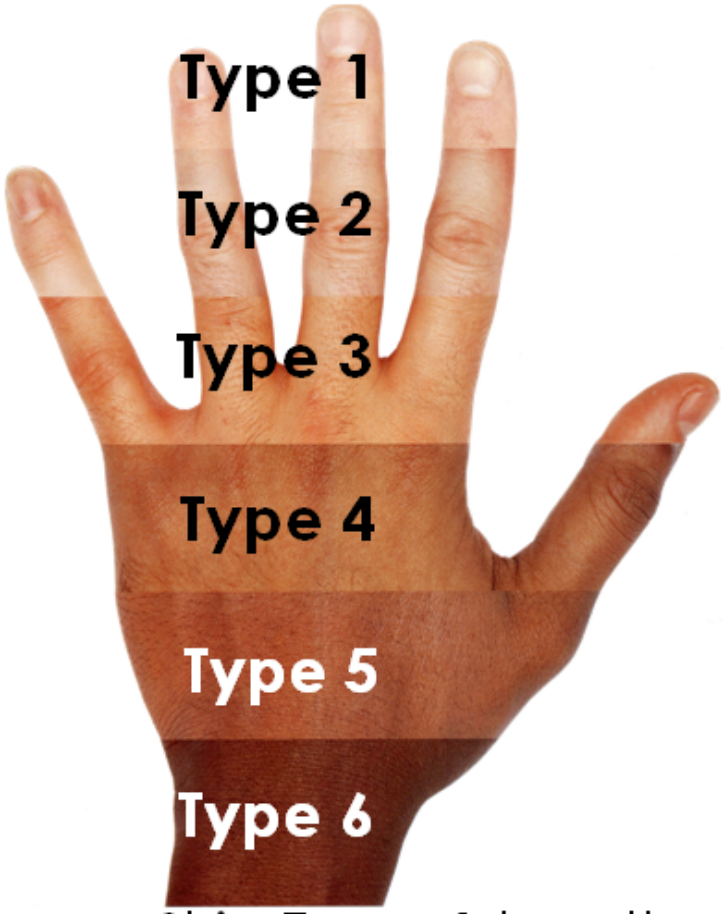
Approach to the sun damaged patient



History

- UV exposure
  - Lived abroad for more than 6 months
  - Childhood sunburn
  - Outdoor hobbies
  - Sun bed use
- Previous history skin cancer or mole excision
  - if yes, what, when, what treatment?
- Family history skin cancer
- Immunosuppressed
- Previous phototherapy/radiotherapy
- Skin type: ‘tanner v burner’

Fitzpatrick Skin Types



White: Always burns, never tans

White: Usually burns, difficulty in tanning

White: Sometimes burns, average tan

Moderate Brown: Rarely burns, tans with ease

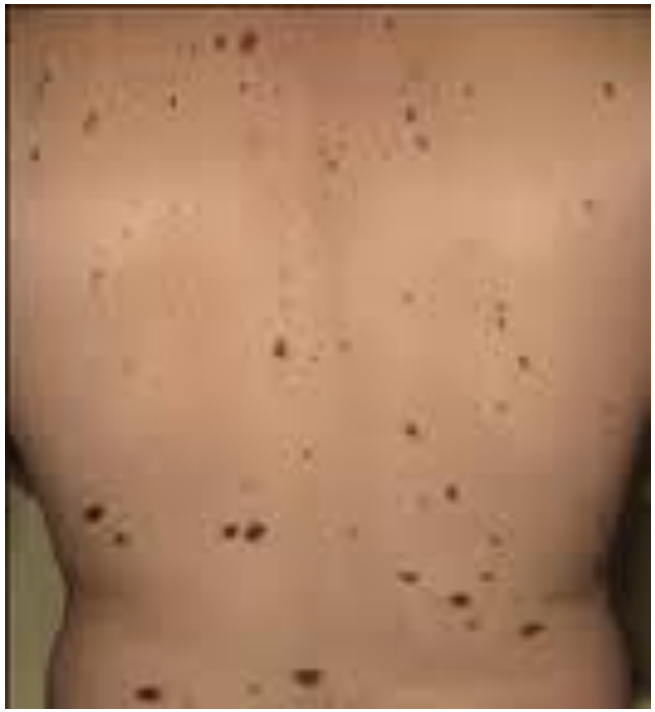
Dark Brown: Very rarely burns, tans very easily

Black: Does not burn, tans very easily

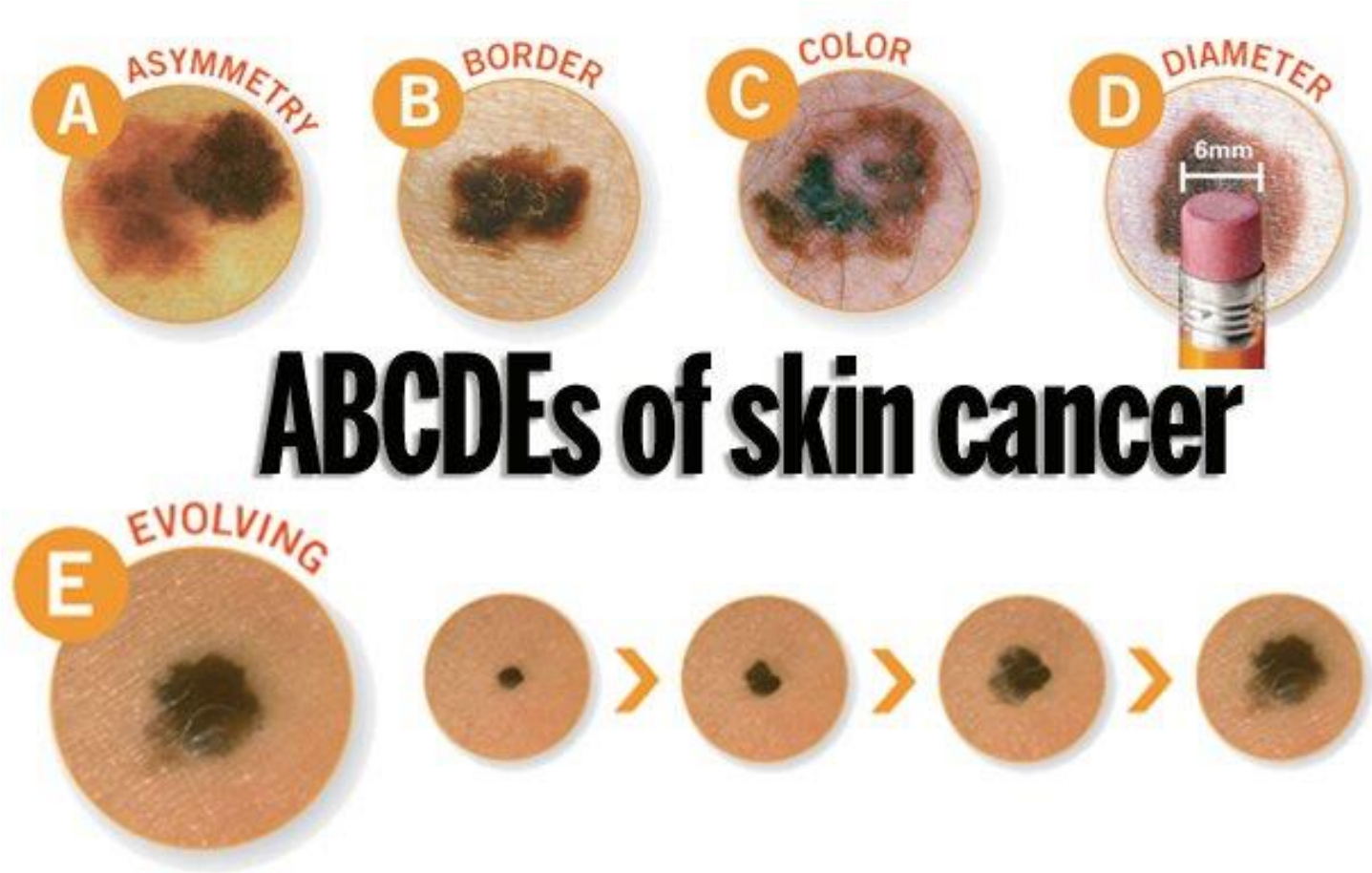
Skin Type 1 has the least melanin, therefore will heat up least, so highest energies can be used

Examination

- Expose
- Full skin check
  - top to toe
- Easy to miss sites
  - palms, soles, webspaces, scalp
- Educate as you examine
- Assessment approach
  - ABCDE
  - ‘Ugly Duckling’ naevus



Assessment of naevi



Assessment of naevi

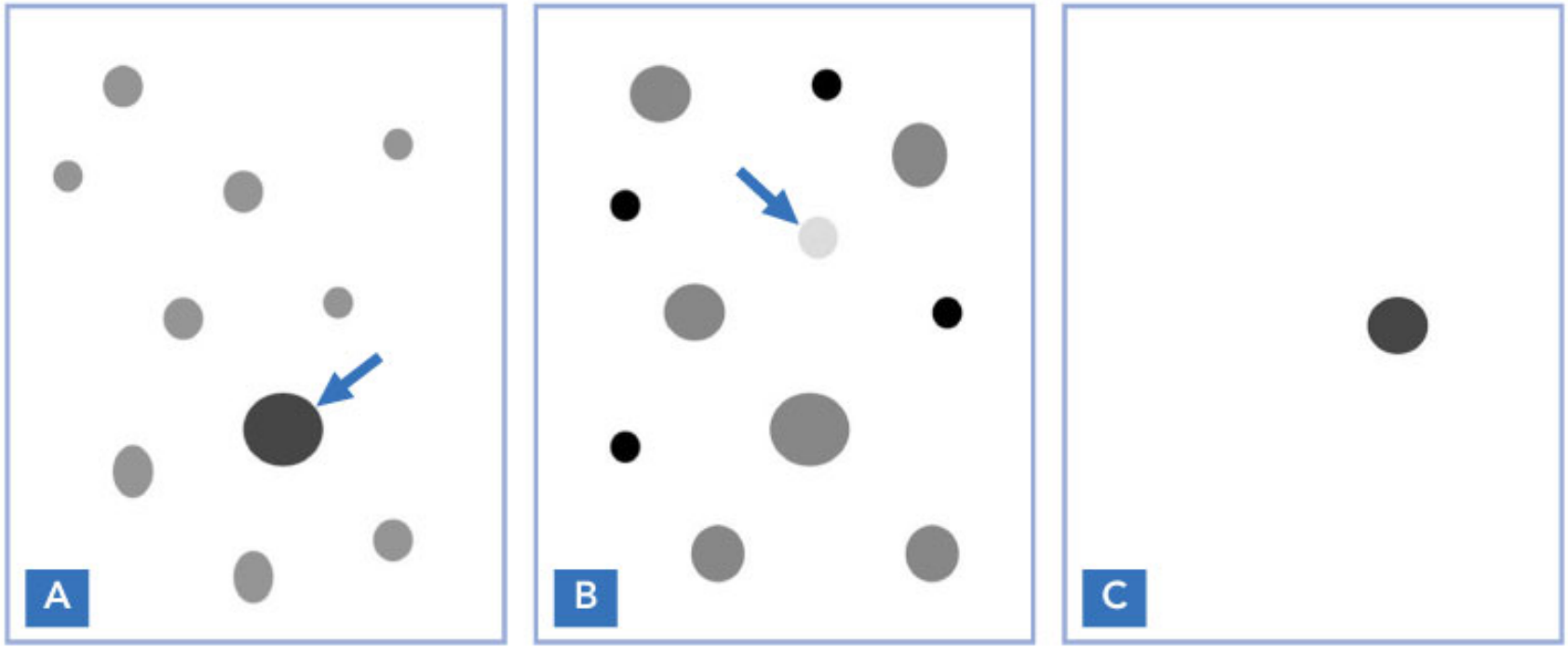
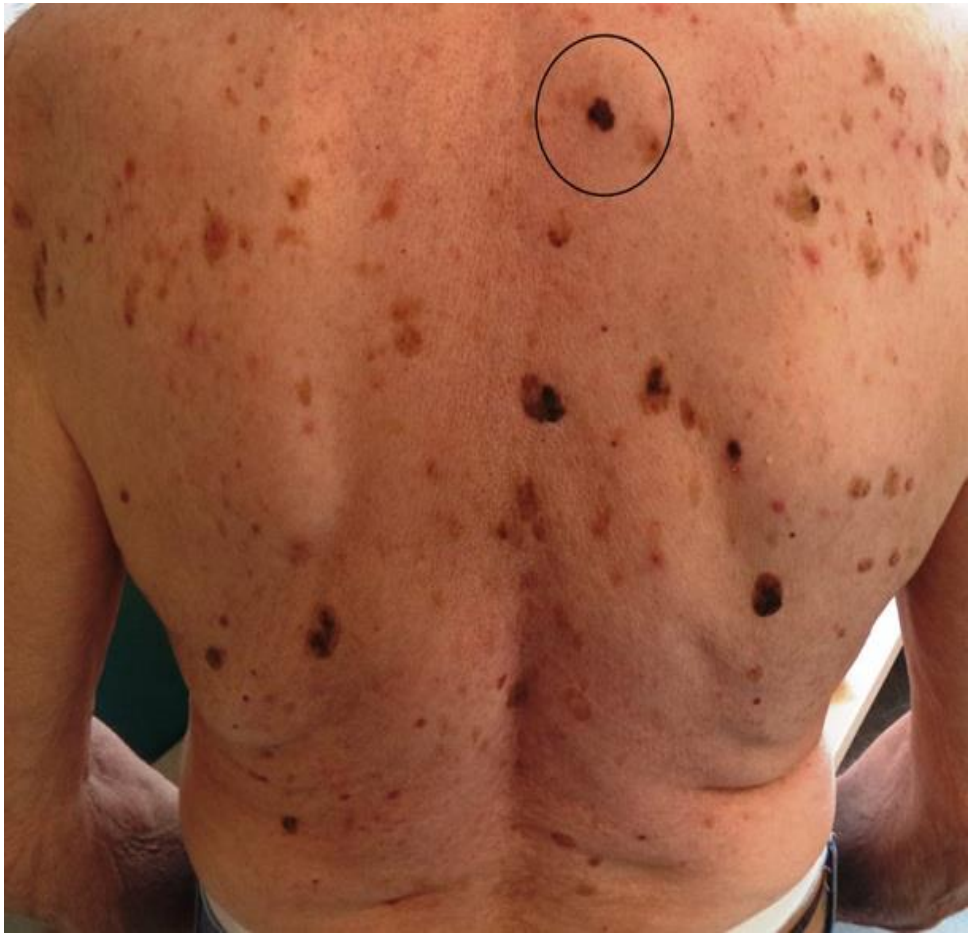
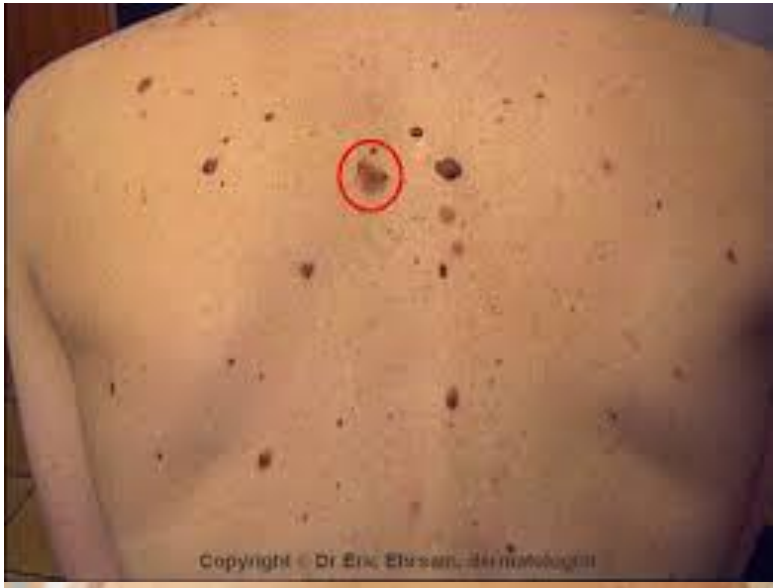
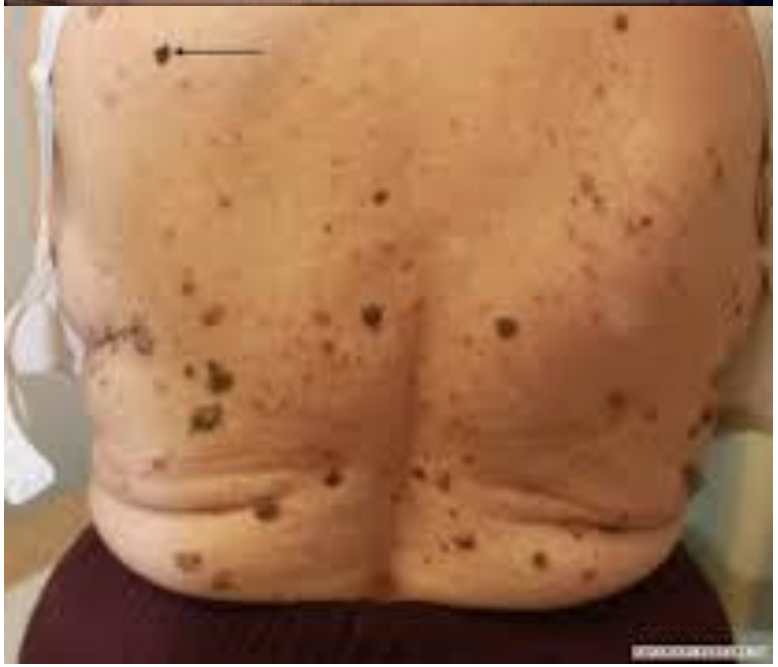


Figure 1. Three Examples of an Ugly Duckling

Assessment of naevi



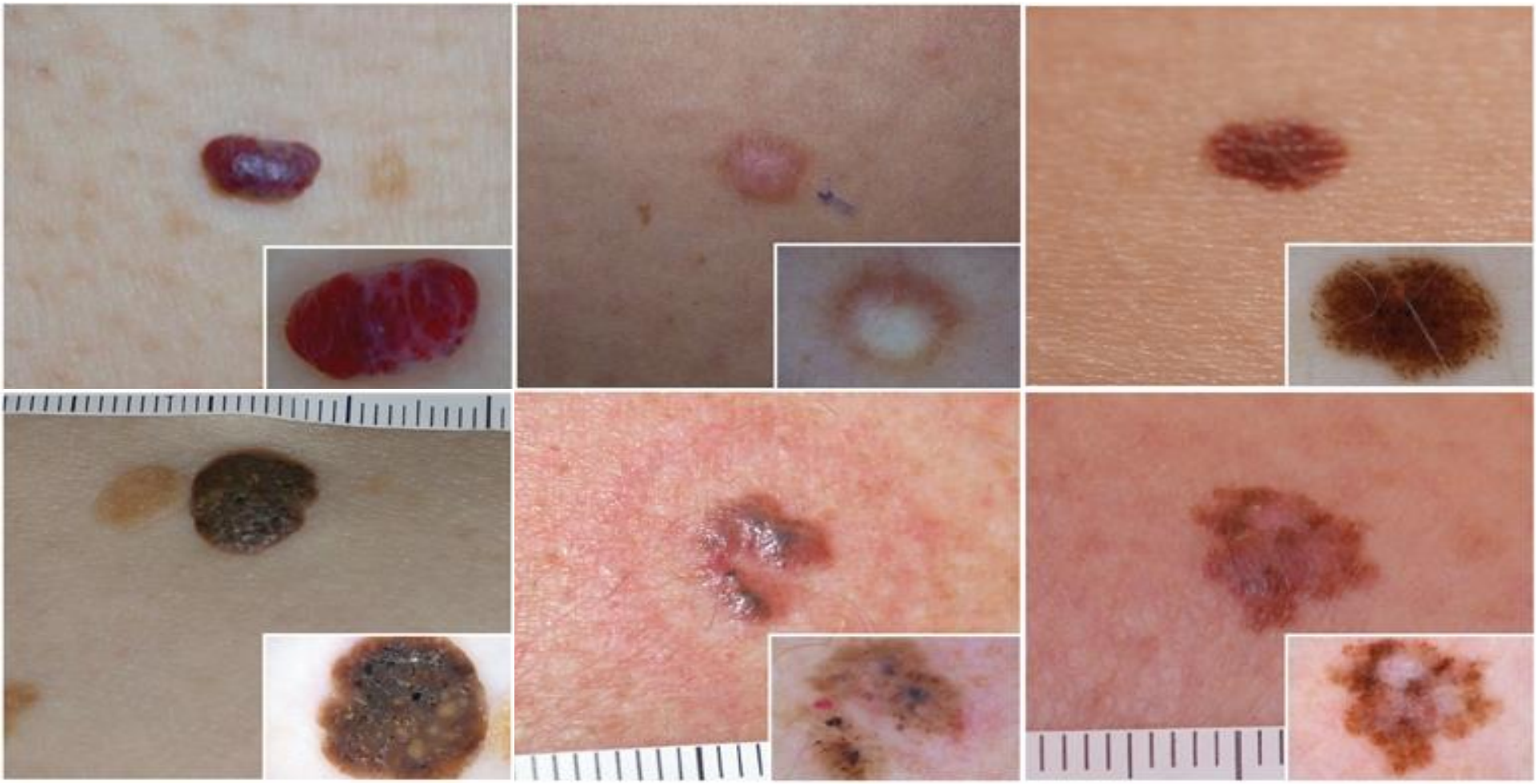




Dermoscopy

- Skin surface microscopy
- Non-invasive, in vivo technique
- Visualization of subsurface skin structures in the epidermis, dermoepidermal junction, and upper dermis
- Use in clinical assessment
  - Pigmented lesions
  - Non-pigmented lesions
  - Identification of benign lesions
  - Teledermatology (teledermoscopy)

Dermoscopy

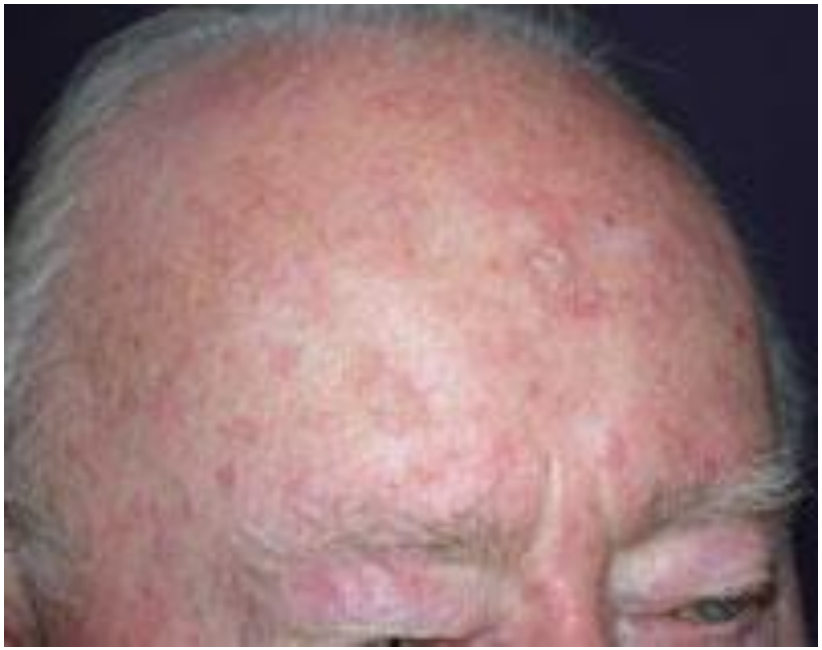


Education

- No more ‘sunbathing’
- Avoid peak hours sun exposure
- Seek shade (40% UVB)
- Keep covered with loose fitting cotton clothing and hat (4” brim)
- Sunblock (SPF 30-50+) apply sufficient quantities and reapply
- ‘Anti-aging’
- Vitamin D

Clinical case

- 70 year old patient
- Type 1 skin
- Served overseas in army
- Recurrent scaling erythematous macules and patches
- Occassional crusting/scab formation
- Distribution in sun exposed sites

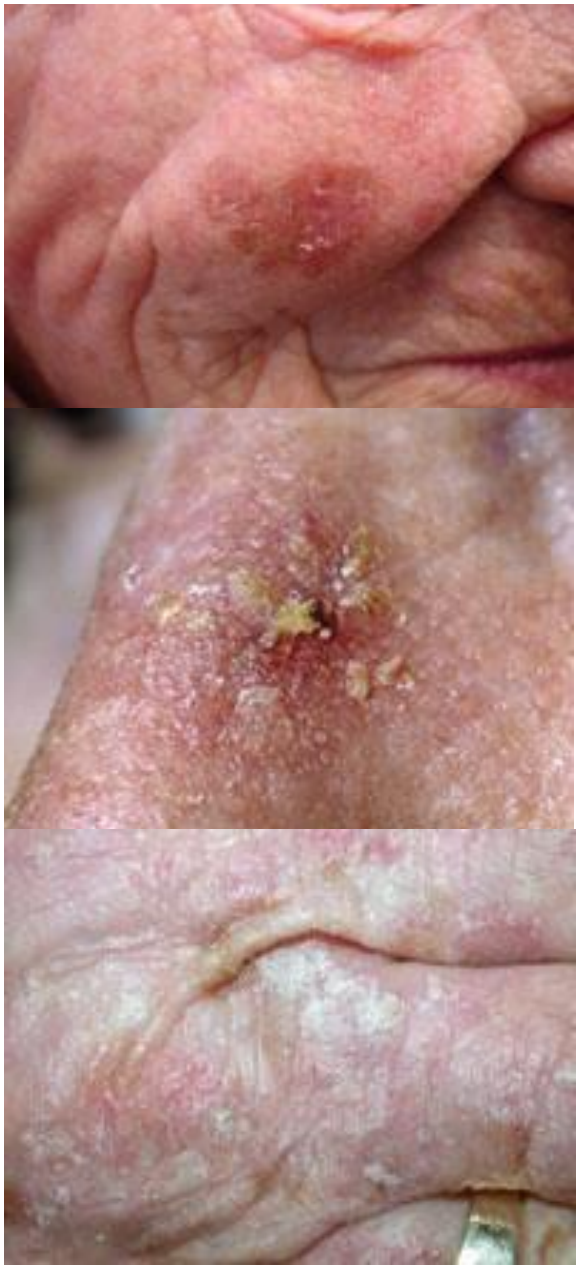


Actinic or solar keratosis

- Actinic keratoses (AK) are keratotic macules, papules or plaques
- Result from intra epidermal proliferation of atypical keratinocytes in response to prolonged UV exposure.
- Most AKs do not progress to cancer
  - estimated risk 1-4%
- Most SCCs arise from pre-existing AK and lesions with high transformation risk cannot be distinguished clinically from benign lesions.
- Most clinicans advocate treatment of AKs

Treatment actinic keratosis

- Destructive therapies
  - Cryotherapy
  - Surgery
    - Excision
    - Cautery
- Topical medications
  - Diclofenac (Solaraze)
  - 5-fluorouracil (Efudix)
  - Imiquimod 5% cream (Aldara)
  - Ingenol mebutate (Picato)
- Photodynamic therapy



Approach to management

- Multiple effective treatment options
- Choice of therapy patient and lesion dependent
  - Lesion-directed treatment cyotherapy or surgery used in isolated lesions
  - Field-directed therapy for multiple lesions or subclinical change
  - Combination treatments
- Indications for biopsy
  - Indurated lesions
  - Painful, ulcerated lesions
  - Hyperkeratotic lesions failing to respond to treatment

Diclofenac (Solaraze)

- Diclofenac 3% in gel formulation
- Nonsteroidal antiinflammatory drug
  - Inhibits cyclooxygenase and upregulates arachidonic acid cascade
  - Prostaglandin production from arachidonic acid may play a role in UVB induced skin cancer
  - Inhibition of this cascade may explain efficacy in treatment of AK
- Apply twice daily for 90 days
- Meta-analysis 3 RCT (n=364)
  - resolution AK 40% treated compared with placebo 12%

5-fluorouracil (Efudix)

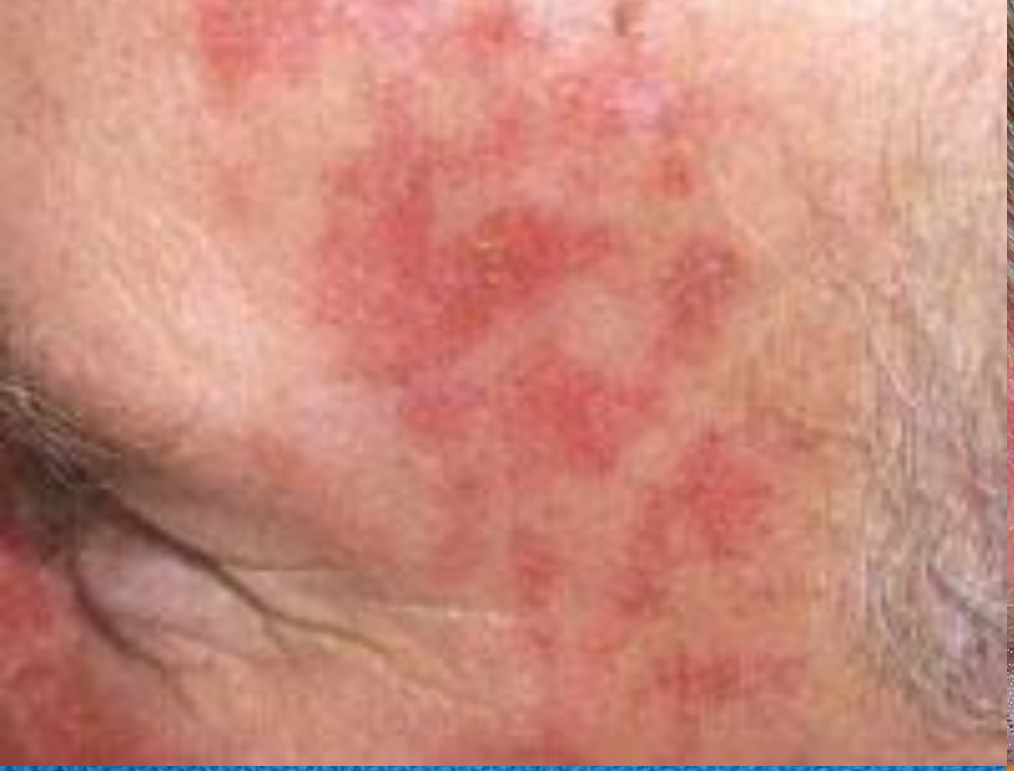
- Inhibits thymidylate synthetase, critical enzyme in DNA synthesis, particularly in fast growing dysplastic cells
- Causes inflammation and dystruction of AK
- 2-4 weeks active treatment, with inflammation taking 2 weeks to subside
- Two systematic reviews
  - 90% efficacy in flat AK, 50% efficacy rate hyperkeratotic AK for 100% AK clearance
- Long term control
  - RCT (n=932) 2.6 year follow up after a standard 4 week treatment. Reduction in rate AK overall, 6 month clearance rate 38%

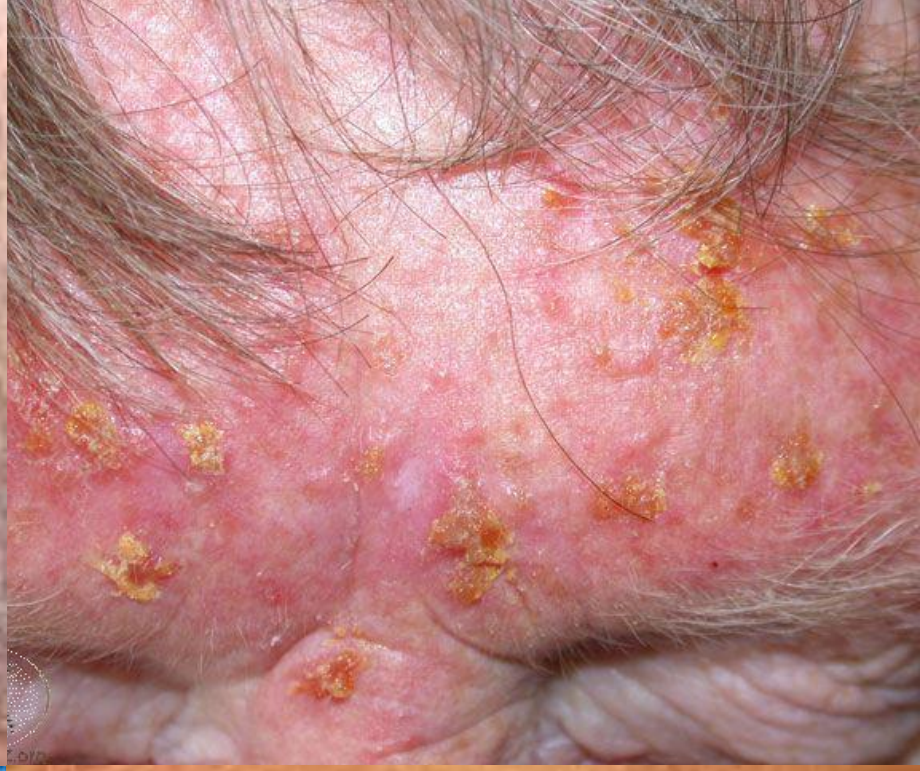
Ingenol mebutate (Picato)

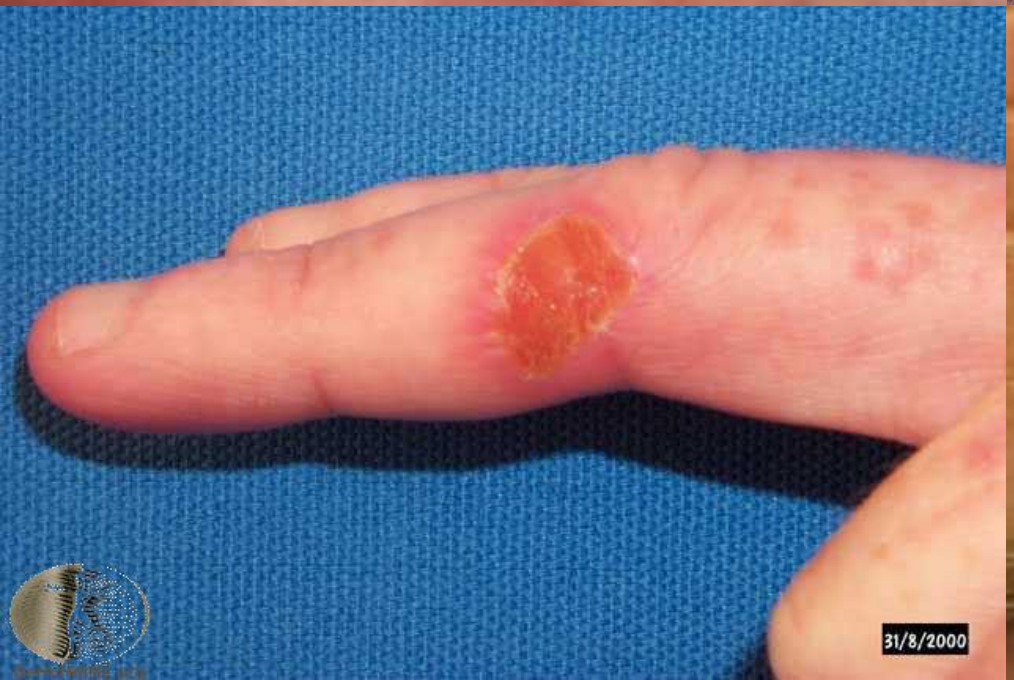
- Derived from sap of *Euphorbia peplus* plant
- Mechanism of action:
  - Disruption of cell plasma membranes and mitochondria leading to cell necrosis
  - Induction of neutrophil-mediated antibody dependent cellular cytotoxicity
- Two formulations
  - 0.015% 3 day treatment to face and scalp
  - 0.05% 2 day treatment trunk or extremities
- Evidence
  - 2 randomised trials (n=547) complete clearance AK 42% v 4% placebo

Imiquimod (Aldara)

- Imiquimod 5% cream
- Topical immune response modifier that stimulates local cytokine induction
- Twice weekly for 16 weeks
- (4 days a week 6 weeks)
- Evidence complete resolution AK in 50% treatment v 5% placebo



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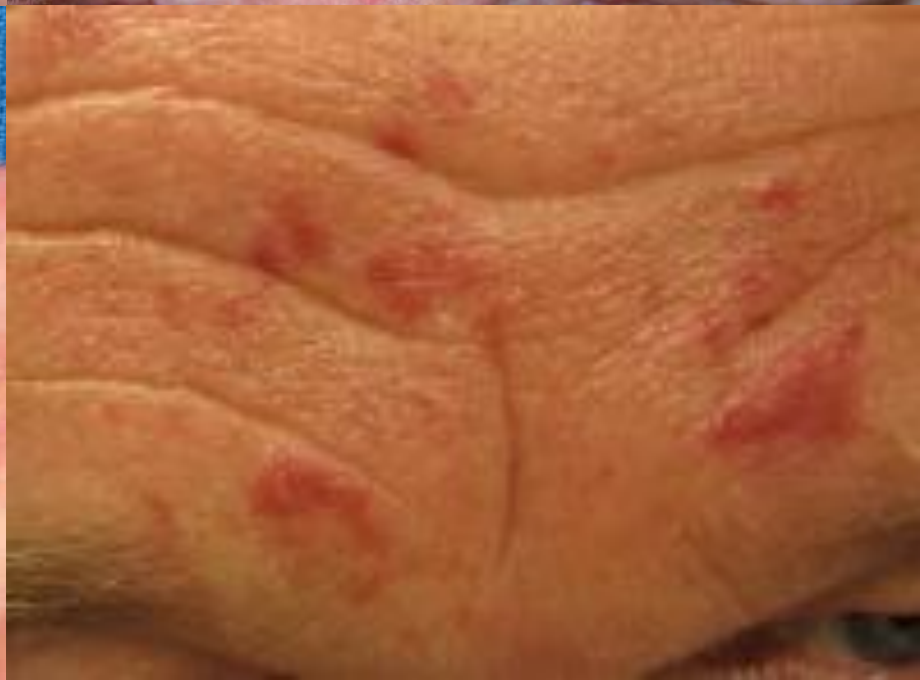
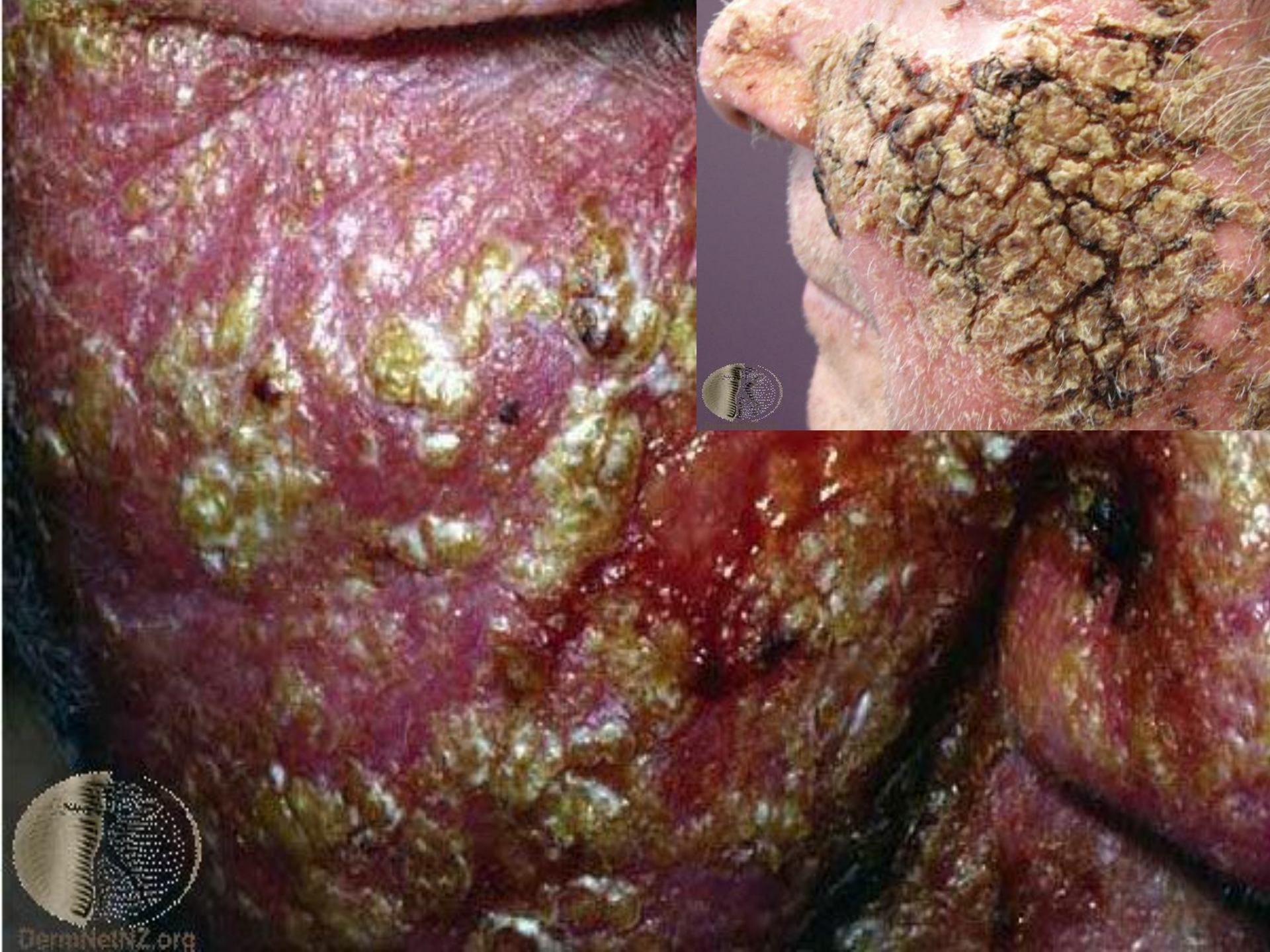
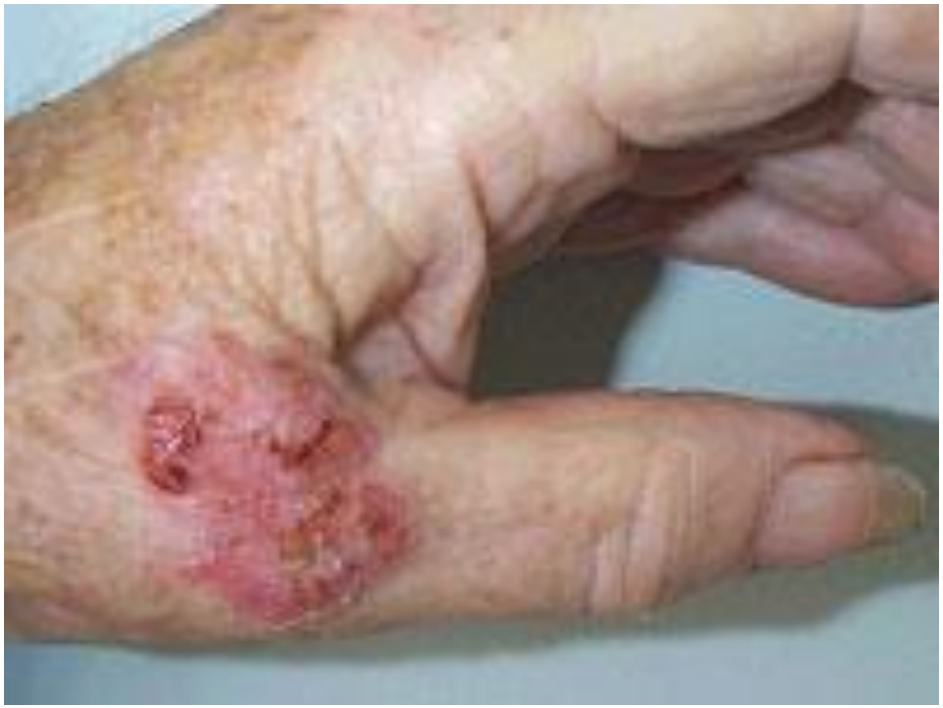



DermNetNZ.org

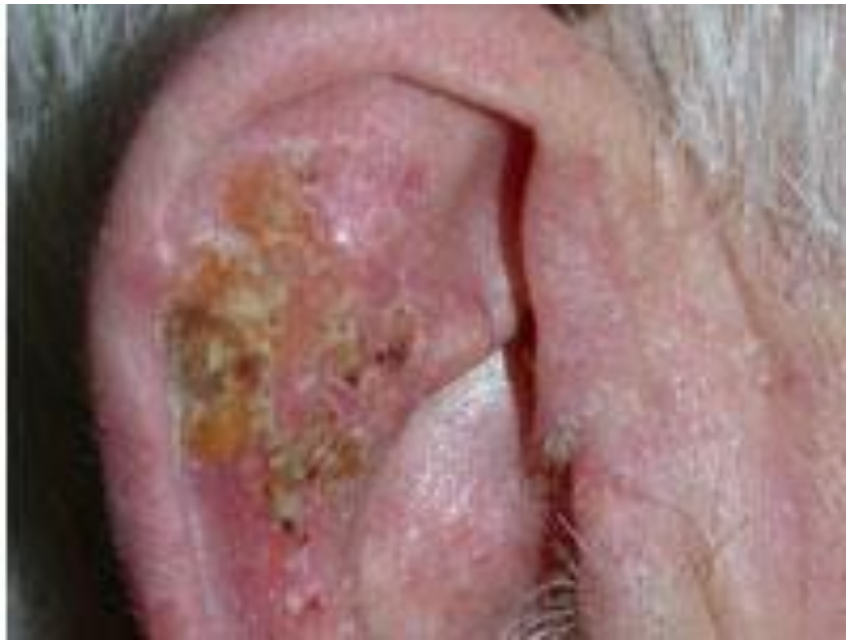
Clinical case

- 65 year old plaque on hand 4 months
- PMH psoriasis
- No response to usual steroid cream
- Scaling and red, occassionally itchy
- Non-tender



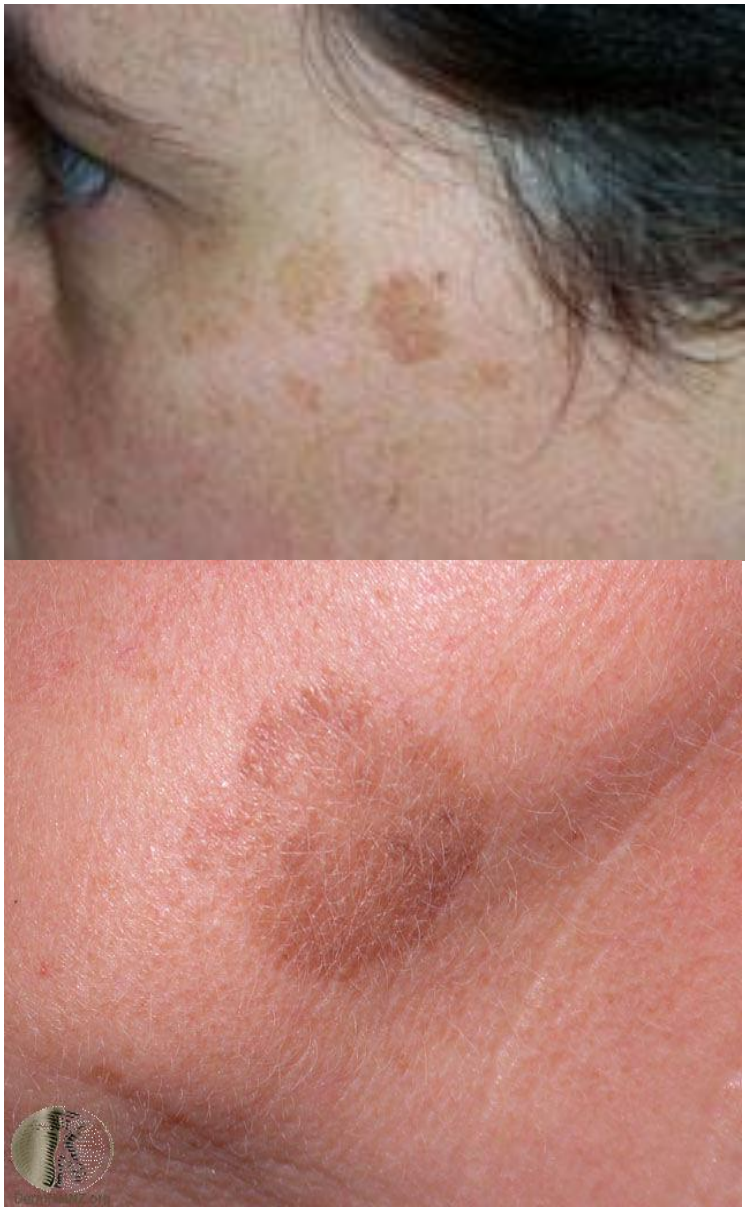
Bowen's Disease

- Intraepidermal SCC
- Treatment
  - Cryotherapy
  - Surgery
    - Excision
    - Cautery
  - Topical
    - Aldara
    - Efudix
  - Photodynamic therapy

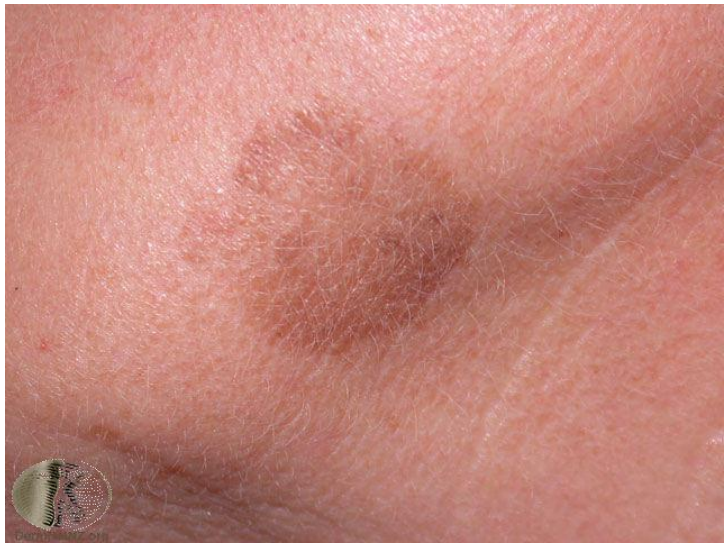


Clinical case

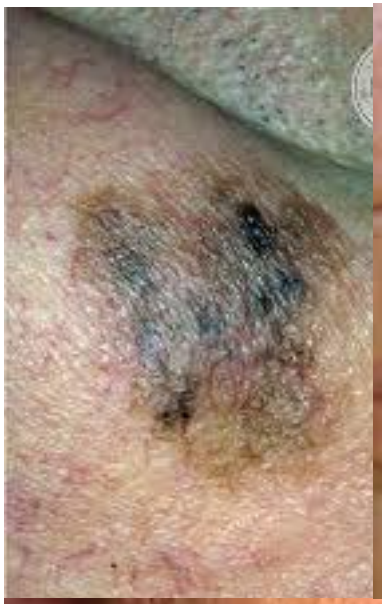
- 50 year old patient
- 1 year history of brown lesion on face
- Darker in summer months
- Anxious because has always enjoyed sunbathing, with frequent holidays abroad

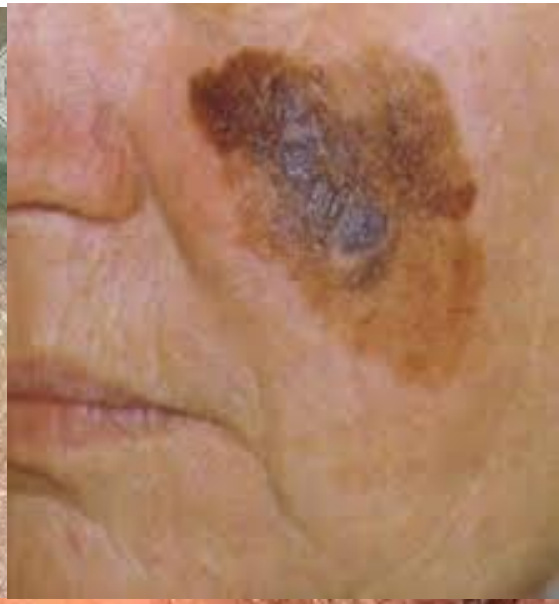


Case discussion



Solar lentigo

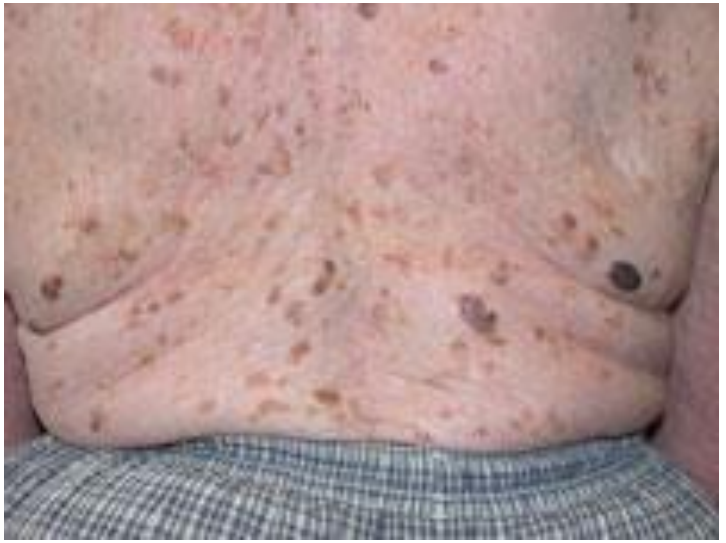


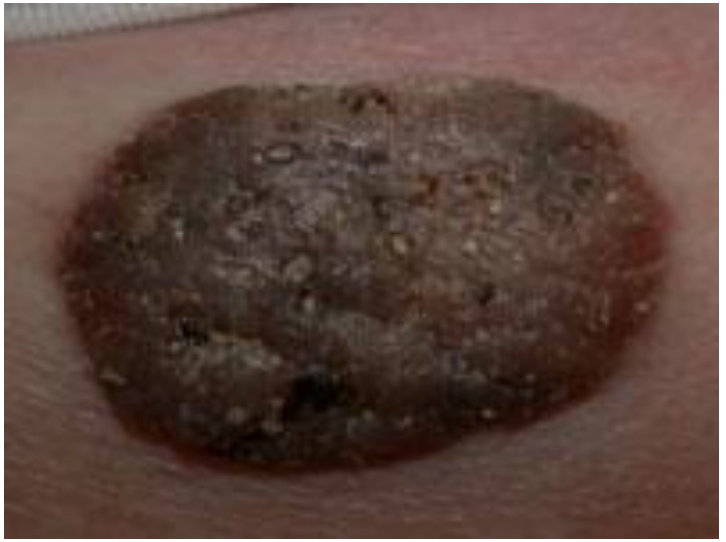


Lentigo maligna and lentigo maligna melanoma

Clinical case

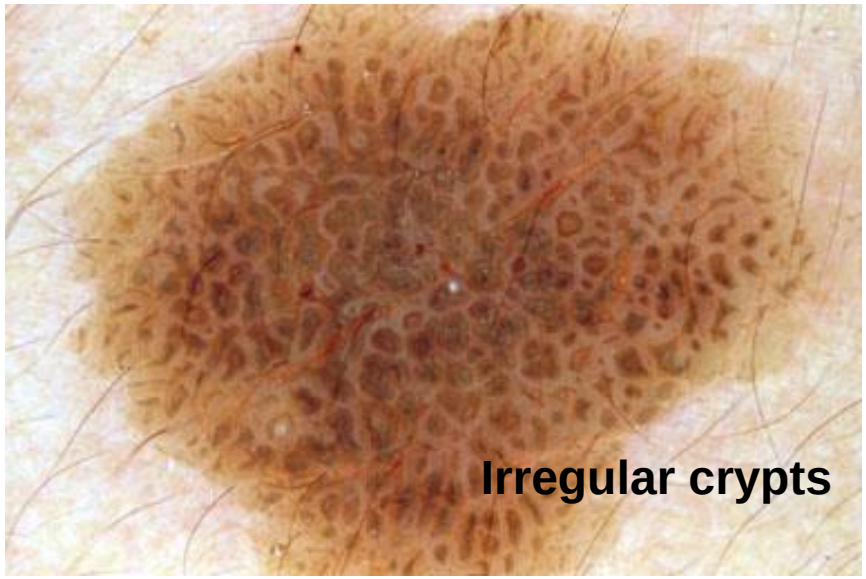
- Patient attended surgery for suspected chest infection
- On auscultating chest GP noticed a number of pigmented lesions, one of which was darker
- Patient not aware of the lesions ‘difficulty seeing her back’, but does report occasional itching





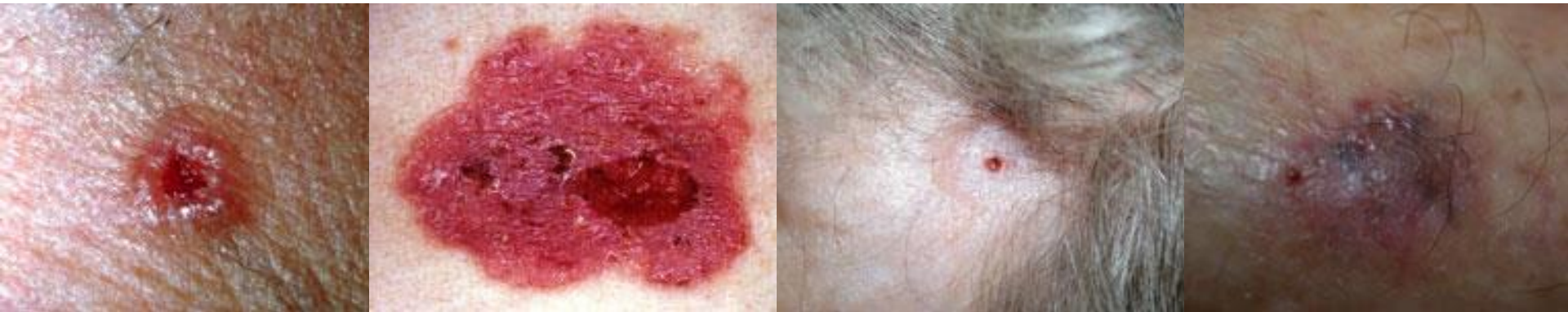
Seborrheic keratosis

- Common harmless skin lesion
- Appear stuck on like barnacles
- Cause unknown
- Felt to be degenerative in nature, appearing as part of the ageing process
- Treatment
  - Cryotherapy
  - Curettage
  - Laser destruction

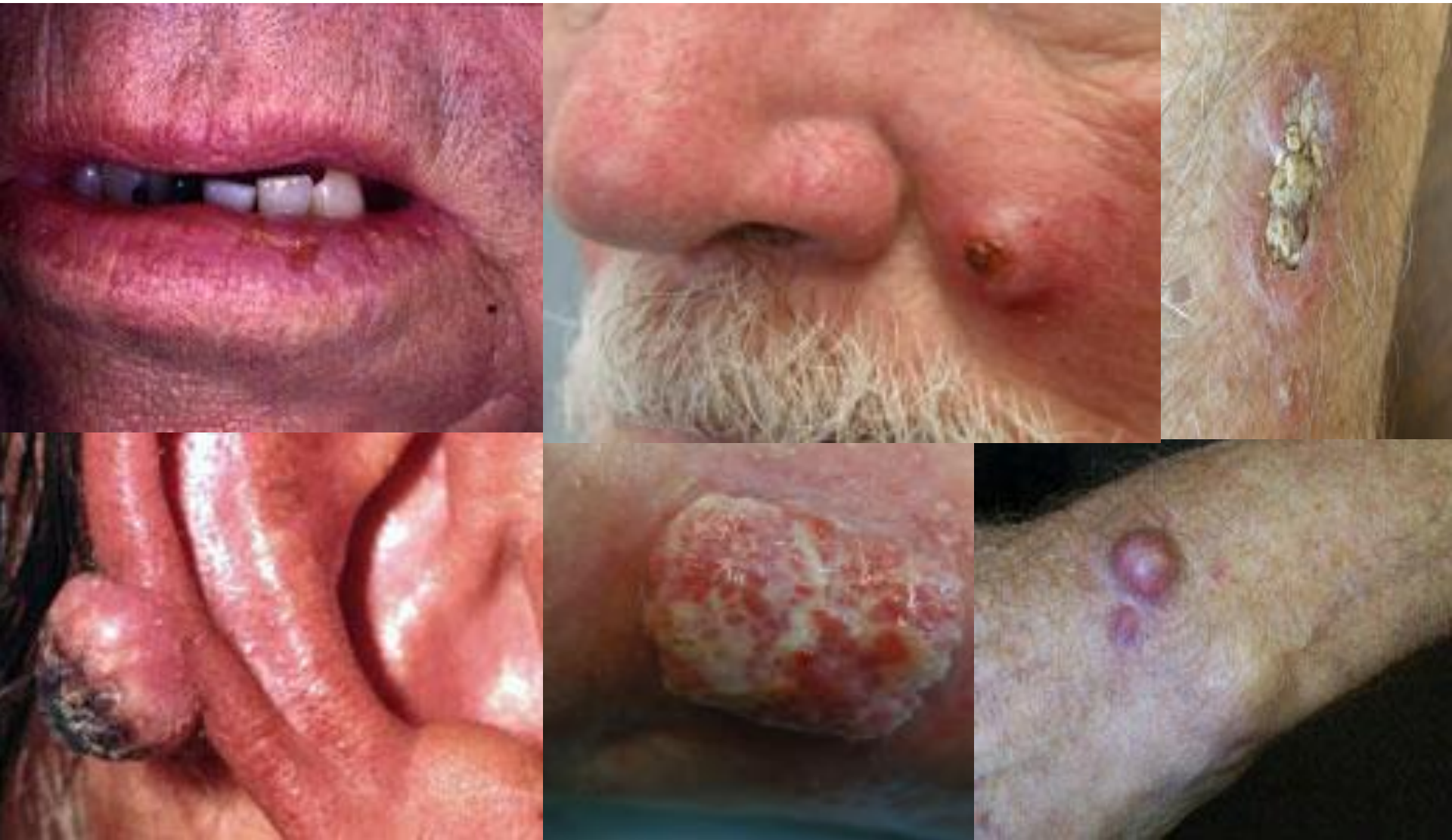


Basal Cell Carcinoma

- Treatment
  - Surgery
    - Excision
    - Curettage and cautery
    - Mohs micrographic surgery -High risk sites/ recurrence
  - Photodynamic therapy
  - Cryotherapy
  - Radiotherapy
  - Topical therapy evidence for use in superficial BCC only
    - 5-FU
    - Imiquimod

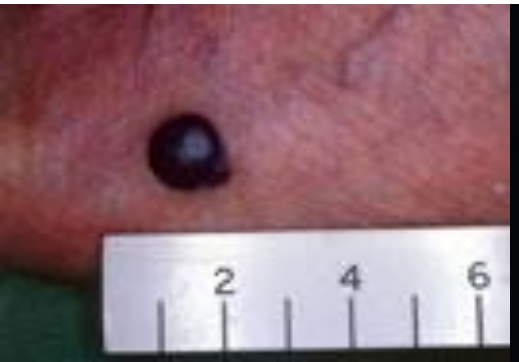


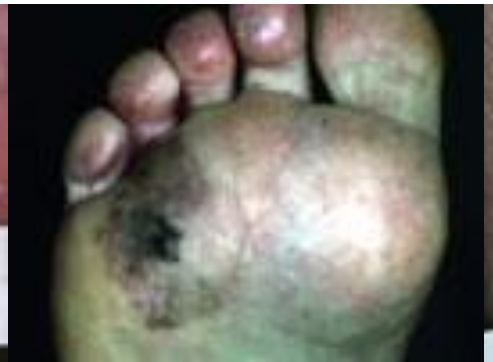
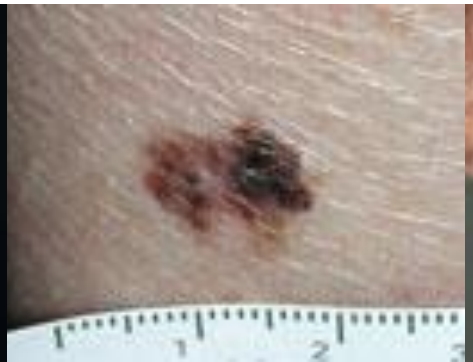
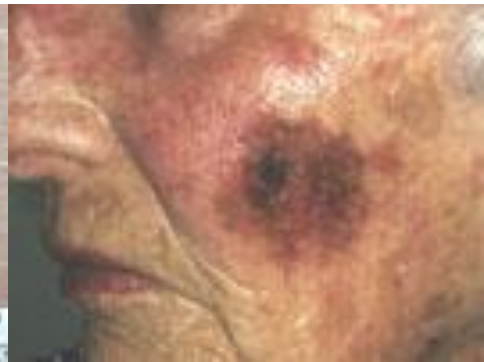
Squamous Cell Carcinoma



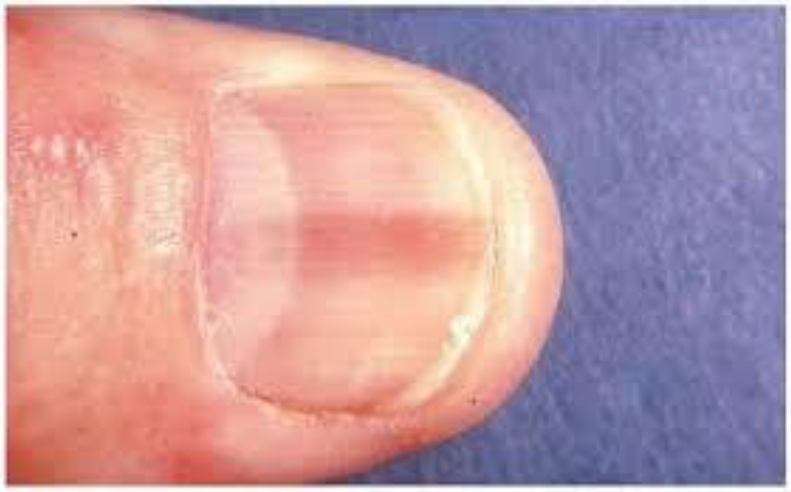
Melanoma

- Superficial spreading melanoma (SSM)
- Lentigo maligna melanoma (sun damaged skin of face, scalp and neck)
- Acral lentiginous melanoma (on soles of feet, palms of hands or under the nails – the subungual melanoma)
- Nodular melanoma (presenting as a rapidly enlarging lump)
- Mucosal melanoma (arising on lips, eyelids, vulva, penis, anus)
- Desmoplastic melanoma (fibrous tumour with a tendency to grow down nerves)



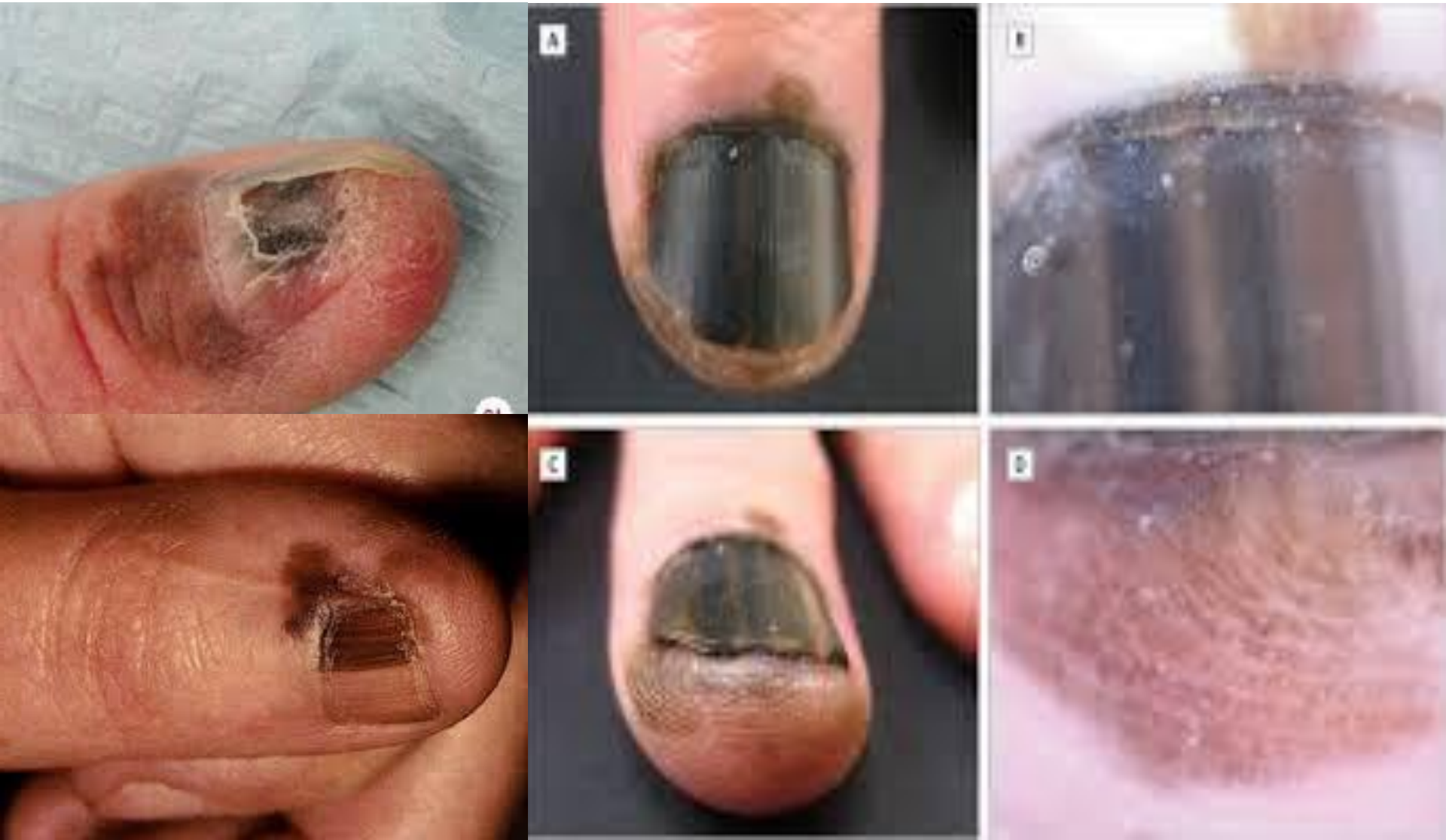
Clinical cases



- Patient has noticed a brown streak in his nail
- Not sure how long present for

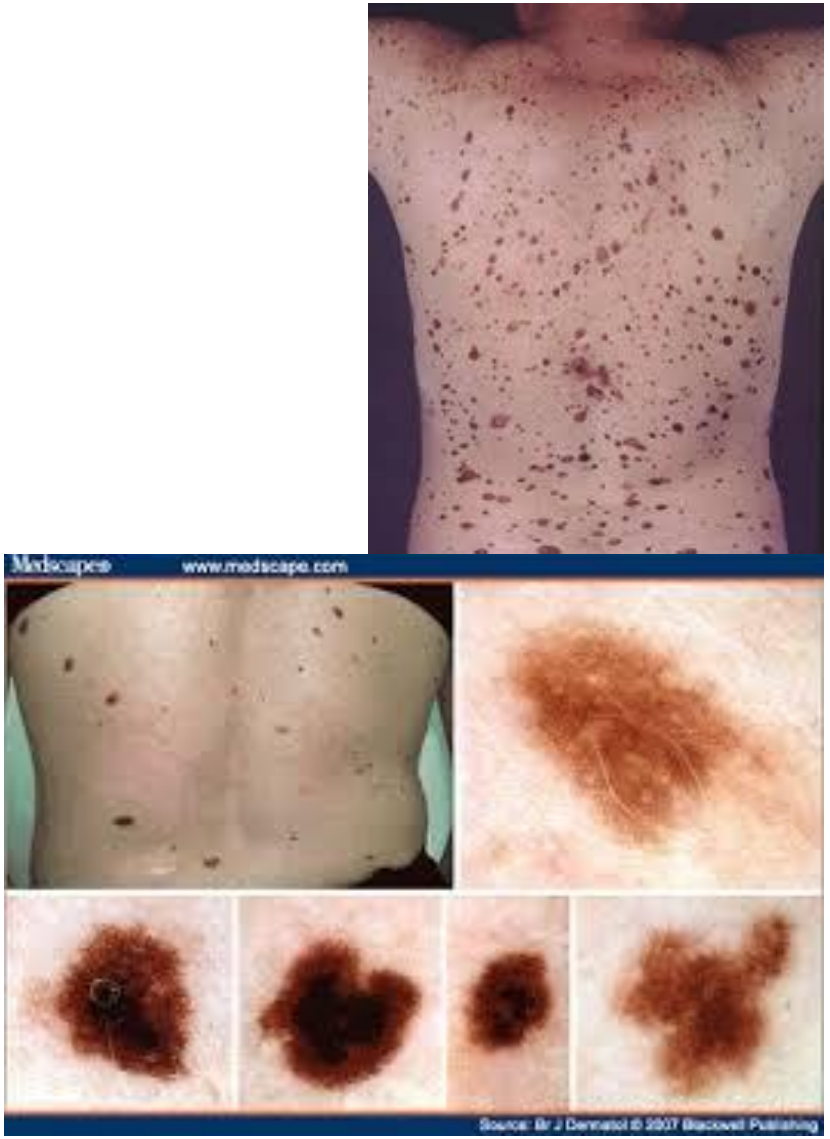
- Patient noticed sudden onset dark mark in nail
- Unsure if traumatised but has been recently moving house

Case discussion



Mole mapping at Hammersmith Hospital

- Referral into the service following consultant dermatologist review
- Criteria for inclusion
  - 150-200 naevi with atypical features
  - Strong FH melanoma
  - Previous history melanoma or multiple dysplastic naevi
  - Exceptions…
- Baseline photographs, 6 months and 12 months



Key Learning Objectives

- Clinical assessment of sun damaged skin
- Sun awareness education
- Approach to managing lesions in the community
  - Actinic keratosis
  - Topical therapies
  - Bowen's disease
- Lesions to refer into hospital based dermatology
  - Basal cell carcinoma
  - Squamous cell carcinoma
  - Melanoma
    - Mole mapping service

Thank you