Actinic (Solar) Keratosis – Primary Care Treatment Pathway

An actinic keratosis (AK) is a common, sun-induced, scaly or hyper-keratotic lesion
AKs are a weak risk factor for skin cancer - less than 1 in 1000 per annum transform in to squamous cell carcinoma.
There is a high spontaneous regression rate.
23% of the population over 60 have AKs
When patients have multiple lesions the risk of one of them becoming malignant increases.

The majority of AKs should be managed in primary care.
Referring in to dermatology clinics unnecessarily overburdens secondary care so that patients with more serious skin disease have to wait longer.

If a patient does not fall into high risk group, or have 'red flag' signs, treat in primary care. Treatment choice should be based on a range of factors:

- The grade of the lesion(s) – see next page
- The surface area of skin to be treated
- Whether the lesion(s) have been previously treated and what with

- **Topical Fluorouracil** is the cost effective treatment that with **clear advice** from GPs most patients tolerate well.
- **Fluorouracil 0.5% and salicylic acid** is the next most cost effective treatment
- **Ingenol gel** is suitable for patients who have tried fluorouracil or who cannot apply it themselves. It is almost double the price of fluorouracil.
- **Diclofenac gel** is slow to act and needs challenging compliance for 60-90 days. If two tubes are needed over this time it will cost more than Ingenol and its prolonged use risks generating more consultations than other treatments

Red Flag Signs – refer to secondary care as a priority cancer referral

Lesions that:

- Are rapidly growing
- Have a firm & fleshy base and/or are painful
- Do not respond to treatment

Identifying high risk patients - consider referral to intermediate care, secondary care or accredited GPwSI.

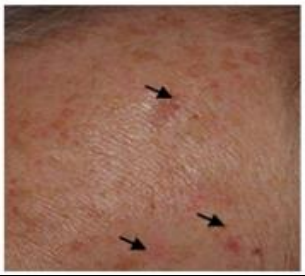
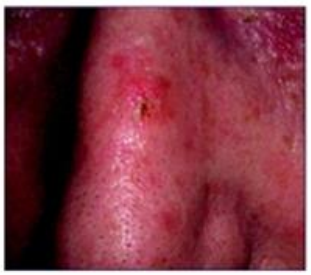
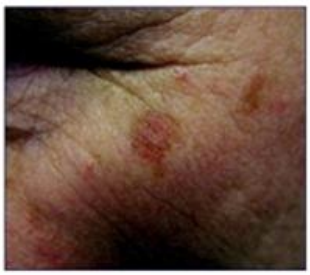
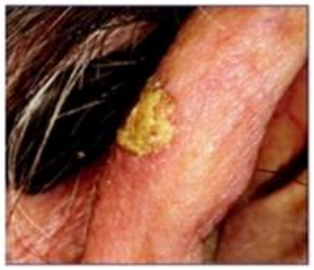
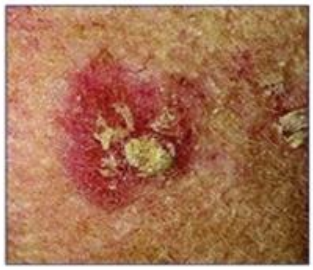
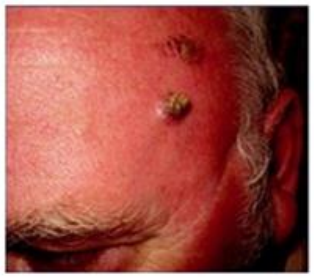
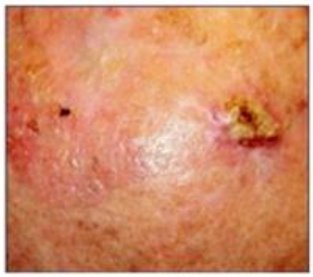
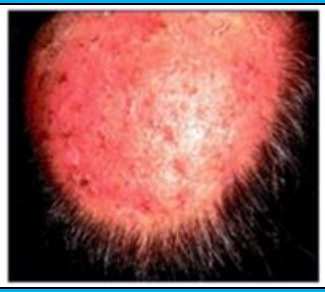
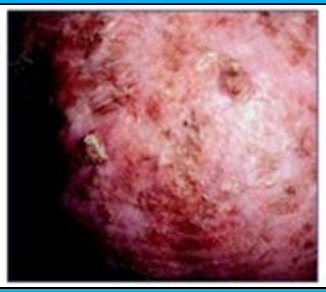
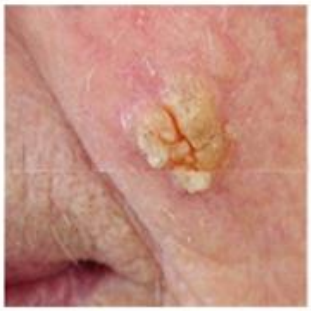
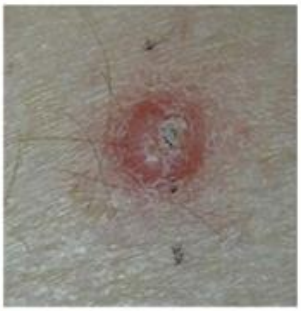
- Immunosuppressed patient
- Past history of skin cancer
- Extensive evidence of sun damage
- Patients with previous history of phototherapy
- Unexpectedly young patients
- Patients with xeroderma pigmentosum

General Measures

- AKs are a sign of sun damage so examine other risk areas– scalp ears face shoulders hands. Advise them they are likely to develop more.
- Encourage prevention: covering skin with hats and clothes and using sun screen (SP50) – children's tear free products can be readily applied to the whole face, powder dri isn't greasy Sunblock can treat early AKs
- Encourage reporting of change eg growth, discomfort, ulceration or bleeding and new lesions
- Encourage use emollients for symptom control and for dry, aging skin. This can help to distinguish between AKs and simple aging skin.
- Click here for Patient Leaflets on AK (BAD leaflet & Patient.co.uk leaflet), General Measures and UV avoidance

Grade of Actinic Keratosis and Treatment choices – see Table 1
Treatment Information – see Table 2

Grade of Actinic Keratosis and Treatment Choices – Table 1

Early Solar Keratosis		
Recommendation or Treatment medal ranking		
Needs no treatment other than general measures		
Grade 1		
Fluorouracil 5% cream	Single or few lesions, **better felt than seen**	 
Fluorouracil 0.5%, salicylic acid 10%		
Diclofenac 3% gel		
Ingenol gel* Discontinued		
Grade 2		
Fluorouracil 5% cream	Moderately thick lesions (hyperkeratotic), **easily felt and seen**	 
Fluorouracil 0.5%, salicylic acid 10%		
Ingenol gel* Discontinued		
If not improving send photograph to secondary care for advice		
Grade 3		
Send photograph to secondary care for advice	Thick hyperkeratotic or obvious AK, differential diagnosis cutaneous horn	 
Depending on local pathways curette or treat with cryotherapy in primary care or secondary care.		
Field Change		
Fluorouracil 5% cream – can be used to treat 500cm^2	Lesions grouped in same area, with marked background damage	 
Diclofenac 3% gel – can be used to treat 400cm^2		
Ingenol gel* Discontinued		
Possible Neoplastic Lesions		
Crusted, indurated and inflamed lesion could turn out to be early squamous cell carcinoma (SCC) – **urgent 2 week referral**		 

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Treatment Information for Topical Preparations

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Drug Name	Licensed Indication	Dose Directions	Area	Duration	Costs	Patient leaflet
Fluorouracil 5% cream (40g)	Topical treatment of superficial pre-malignant and malignant skin lesions; keratosis including actinic forms	Apply once or twice daily, start gradually until tolerance established	max. area of skin treated at one time, 500 cm^2 (e.g. 23 cm × 23 cm)	3-4 weeks	40g £32.76	PIL BAD YHFT
0.5% Fluorouracil and 10% salicylic acid (25ml)	Topical treatment of slightly palpable and/or moderately thick hyperkeratotic actinic keratosis (grade I/II)	Apply once daily unless side effects severe, then reduce frequency to 3 times a week until side effects improve	max. area of skin treated at one time, 25 cm^2 (e.g. 5 cm x 5 cm)	Up to 12 weeks	25ml £38.30	PIL BAD
Diclofenac 3% gel (50g, 100g)	Actinic keratosis in adults	Apply thinly twice daily	(Max 8g daily) Normally 0.5 grams (the size of a pea) of the gel is used on a 5cm x 5cm lesion site.	60-90 days	50g £38.30 100g £76.60	PIL
Ingenol gel has been discontinued						

PLEASE NOTE:

- **All topical treatments cause inflammation, the mechanism by which they treat the condition.** If inflammation is severe then the treatments should be stopped until the reaction subsides and then restarted, perhaps at a reduced frequency. Patients MUST be warned to expect this effect of the treatment rather than regarding it as an unwanted side effect. 1% hydrocortisone cream can be used to settle inflammation if needed
- Complete clearance of lesions can be delayed several weeks beyond completion of topical therapies.
- Give patients the local leaflet and arrange review as guided

Owner: Drs Shaun O'Connell & Nicki Law Date published October 2014 (updated July 2020 only to reflect Ingenol withdrawal) Next review: October 2016