# Actinic Keratoses- Primary Care treatment Pathway

- Actinic Keratoses are scaly, rough or crusted, reddish, brownish or skin coloured, keratotic lesions, predominantly seen on the face, head, neck, forearms and ears, as a result of chronic sun exposure. AKs may resolve, remain stable, or progress to invasive SCC. The risk for progression to invasive SCC over a 10-year period for patients with multiple AKs has been estimated at 10%
- AK can present as single lesions, as multiple lesions or in the context of field cancerization. The lesions can be classified into 3 different clinical grades
  - **Grade I**: Single or a few flat, pink or grey lesions with slight scale or gritty to touch. Easier felt than seen
  - **Grade II**: Moderately thick hyper keratoses on background of erythema that are easily detected
  - **Grade III**: Severe, hyperkerototic , thick lesions
  - **Field Cancerization**: Confluent areas of several centimetres or more with a range of features matching any or all of the grades of AK
- AK should be managed in primary care, except for "high risk" and "red flags" patients. The choice of treatment depends on the number, size, duration, and location of lesions, patient's compliance, and cosmetic outcome

## Red Flags

- Lesions that are rapidly growing , painful and /or bleeding
- An elevated lesion (papule / nodule) lesions that have a firm and fleshy base (Hypertrophic )
- Ulceration, induration and tenderness
- Surrounding inflammation
- Lesions on lips where SCC can be very subtle

## High Risk Patients

- Immunosuppressed patient
- History of skin cancer
- Extensive evidence of sun damage
- Previous history of phototherapy (UVB/PUVA)
- Young patients (<35 years )
- Xeroderma pigmentosium
- Periocular AK
- Previous failure to respond **to first line therapies in primary care**

**History/ examination suggestive of SCC** → **Priority Cancer referral to secondary care under 2-week wait**

**SCC is unlikely** → **Refer to accredited GPwSI or secondary care**

## Patient Education/ empowerment

- Patients should have a full understanding of their diagnosis, how to apply, and duration of their treatment, as it is one they may require intermittently
- Patients should be warned at the outset of using active topical therapies to expect local skin reactions/inflammation, which can be severe and last for a few weeks. Details are included in the relevant PILs
- Actinic Keratoses are a marker of sun damage, patients should be advised to examine risk areas such as scalp, ears, face , shoulders and hands regularly
- Patients should understand skin cancer and how to prevent it: covering skin with hats and clothes and using sun screen. Patient Information Leaflet available on:
  https://patient.info/health/preventing-skin-cancer , http://www.bad.org.uk/for-the-public/patient-information-leaflets
- Encourage patients to report change e.g.: growth, discomfort, ulceration, bleeding and new lesions

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# Management of Actinic Keratoses

## Solitary AK Lesions

- Few lesions or larger numbers that are widely distributed
- Treating individual lesions and not the surrounding area

### Grade I and Grade II

- Cryotherapy
- Fluorouracil 0.5% & salicylic acid 10%
- Ingenol mebutate (150mcg/g - face and scalp, 500mcg/g - Trunk and extremities)

- Fluorouracil 5% cream
- Imiquimod 5% Cream
- Imiquimod 3.75% Cream
- Photodynamic Therapy (PDT) – Hospital Only

### Grade III

**Non-Hypertrophic lesions** → 
- Cryotherapy
- Curettage

**Hypertrophic Lesions** → Refer to GPwSI or secondary care

## Field Cancerization

- Multiple AKs with background erythema
- Treating the whole area of field change and not just the individual lesions

### Small Areas

- Diclofenac sodium 3% in a sodium hyaluronate
- Ingenol mebutate (150mcg/g - face and scalp, 500mcg/g - Trunk and extremities) use only in areas up to 25cm$^2$

- Fluorouracil 5% cream: Use on area up to 500 cm$^2$
- Imiquimod 5% Cream: Use on area up to 25 cm$^2$
- Photodynamic Therapy (PDT) – Hospital Only

### Large Areas

- Diclofenac sodium 3% in a sodium hyaluronate

- Fluorouracil 5% Cream: for treating up to 500 cm$^2$
- Imiquimod 3.75% Cream : For use on full face or balding scalp
- Photodynamic Therapy (PDT) – Hospital Only

**Treatments to be prescribed by GPs** (green) **Treatments to be prescribed by GPwSI / specialist** (red)

## Additional Notes

1. Cryotherapy is more efficacious than topical drug therapies and is the treatment of choice for discreet areas of AK if available
2. Patient should be provided with advice on how to manage side effects : break in treatment, altering the frequency of application, use of emollient and in some instances applying hydrocortisone 1% cream to settle the inflammation
   - Cryotherapy: Loss of pigmentation and scarring. Blistering, oedema and soreness are also common
   - Ingenol Mebutate : Skin reaction may occur from day one and usually resolves within 2-3 weeks . Avoid contact with the eyes
   - Diclofenac sodium 3%: well tolerated. May cause slight pruritus, dryness, erythema or rash
   - Fluorouracil 5% Cream: inflammation of the skin is expected, but if the skin becomes very sore or uncomfortable stop using allow the reaction to settle
   - Fluorouracil 0.5%, salicylic acid 10%: Early and severe inflammatory reaction is normal, typically peaking in the second week.
   - Imiquimod 5% and Imiquimod 3.75% cream: Flu like symptoms are usually reported
3. **For large areas of field cancerization: it may be preferable to divide into smaller ones and treat sequentially. The size of the field needs to be defined with the patient to ensure anticipation and tolerance of side effects.**
4. Complete clearance can be delayed for up to several weeks following completion of topical therapies.

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## Treatment Information for topical preparations

| Drug Name | Brand Name | Licensed Indication | Dose Direction | Area | Duration | Treatment Outcome |
|---|---|---|---|---|---|---|
| 0.5% Fluorouracil and 10% Salicylic Acid | Actikerall® | Topical treatment of slightly palpable and/or moderately thick hyperkeratotic actinic keratoses (grade I/II) in immunocompetent adult patients. | apply to affected area once daily to the affected area until the lesions have completely cleared or for up to a maximum of 12 weeks Actikerall PIL | Max. area of skin treated at one time, 25 cm2 | up to 12 weeks | 4-8 weeks after treatment |
| Ingenol Mebutate 150mcg/g (3x0.47g single use tubes) | Picato | Actinic Keratoses on the face and scalp in adults | Apply once daily to the affected area for 3 consecutive days. Allow gel to dry for 15 mins and avoid washing area for 6 hours. Picato 150mcg/g gel PIL | treatment area of 25 cm2 | 3 days | 8 weeks after treatment |
| Ingenol Mebutate 500mcg/g (2x0.47g single use tubes) | Picato | Actinic keratoses on trunk and limbs | Apply once daily for 2 days. Allow gel to dry for 15 mins and avoid washing area for 6 hours. Picato 500mcg/g gel PIL | treatment area of 25 cm2 | 2 days | 8 weeks after treatment |
| Diclofenac sodium 3% Gel | Solaraze® | actinic keratoses | Apply thinly twice daily for 60–90 days; max. 8 g daily. Solaraze PIL | 0.5 grams of the gel is used on a 5 cm x 5 cm | 60-90 days | Up to 30 days after treatment |
| Fluorouracil 5% Cream | Efudix® | topical treatment of superficial pre-malignant and malignant skin lesions | Apply thinly to the affected area once or twice daily. For widespread sun-damage, it is advisable to divide the affected area into smaller areas and to complete treatment in one area before moving on to the next. This will help make the treatment more tolerable Efudix BAD PIL | Max. area of skin treated at one time, 500 cm2 | 3–4 weeks | 1-2 months after therapy is complete |
| Imiquimod 5% Cream | Aldara® | AKs on the face or scalp when other treatment options are contraindicated or less appropriate | Apply to lesion 3 times a week at night for 4 weeks and leave on skin for 8 hours; repeat 4-week course if lesions persist after 4 weeks interval; max. 2 courses. Aldara PIL | Treatment area of $25cm^2$ ( 5 cm x 5 cm)- One sachet a day | 4 weeks can be repeated | 8 weeks after the last 4-weeks course of treatment |
| Imiquimod 3.75% cream | Zyclara® | AK of the full face or balding when other topical treatment options are contraindicated or less appropriate | Apply to lesion on face or balding scalp at bedtime for 2 weeks (max. 2 sachets daily); repeat course after a 2-week treatment-free interval. Zyclara PIL | Full face or balding scalp | 6 weeks : 4 weeks treatments and 2 weeks interval | 8 weeks after 2nd course |

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