

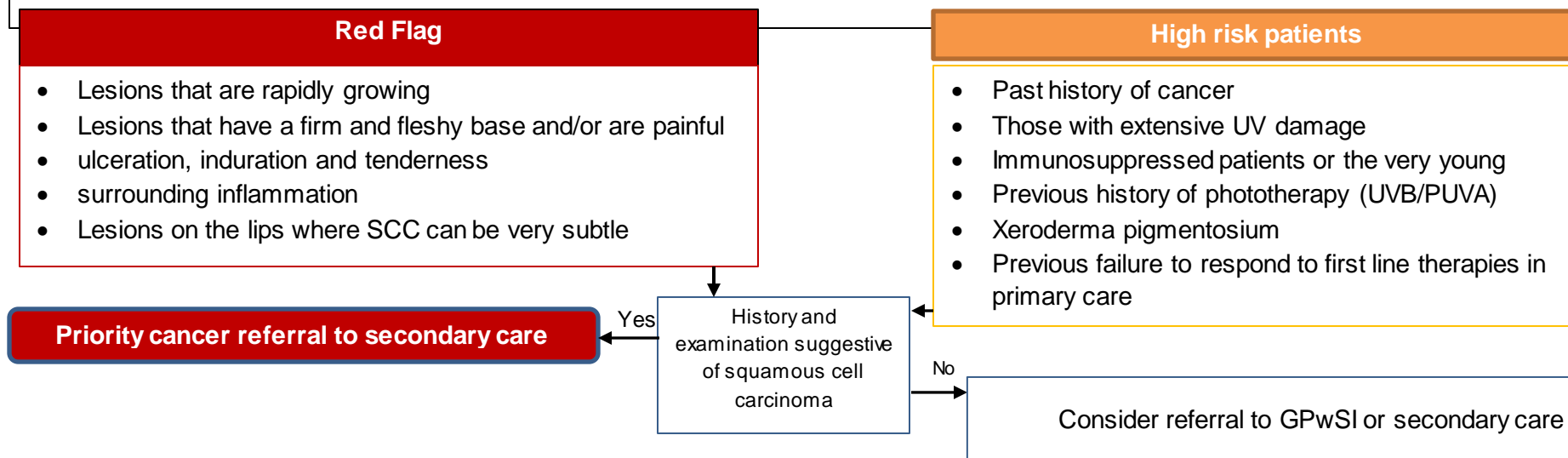
## Management of actinic keratosis in primary care

Actinic keratoses (AK) are scaly or hyper-keratotic lesion predominantly on the skin of the head, face, neck, forearms, ears and dorsa of the hands, as a result of chronic exposure to ultraviolet (UV) radiation. AK has a very small potential to become malignant.. There is a high spontaneous regression rate and a low rate of transformation (<1 in 1,000 per year), but with an average of 7.7 AKs the risk of one transforming in 10 years is 10%.

AK can present as single lesions, as multiple lesions or in the context of field cancerization (*see appendix 1 for pictorial examples*). 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, hyperkeratotic , thick lesions
- Field change: 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.



If not high risk and they do not have red flags, consider treatment in primary care.

Treatment depends on the clinical grade (*see appendix 1 for pictorial examples*), site, the number of lesions, presence or absence of field damage, the size of the area affected and whether the lesion(s) has been previously treated with cryotherapy or topically.

	<b>Grade 1:</b> single or few lesions, easier felt than seen	<b>Grade II:</b> moderately thick lesions, easily felt and seen	<b>Grade III:</b> thick hyperkeratotic lesions	<b>Field change</b>	
				Small – up to 25cm <sup>2</sup>	Large
First line treatment (can be prescribed by GPs)	<ul style="list-style-type: none"> <li>Liquid nitrogen<sup>1</sup></li> <li>3% diclofenac gel</li> <li>5% Fluorouracil cream</li> <li>Ingenol mebutate gel (150mcg/g for face and scalp, 500mcg/g for trunk and extremities)</li> </ul>	<ul style="list-style-type: none"> <li>Liquid nitrogen<sup>1</sup></li> <li>5% Fluorouracil (5-FU) cream</li> <li>Ingenol mebutate gel</li> </ul>	Liquid nitrogen Curettage	3% diclofenac gel 5% fluorouracil cream Ingenol mebutate gel	3% diclofenac gel
Second line treatment (prescribed by GPwSI or specialist only)	Imiquimod	<ul style="list-style-type: none"> <li>Photodynamic therapy</li> <li>Imiquimod 3.75% cream</li> <li>Imiquimod 5% cream</li> </ul>		Photodynamic therapy Imiquimod (Aldara or Zyclara)	3.75% imiquimod
General notes on therapy	<ul style="list-style-type: none"> <li>Refer to the BNF and manufacturer's instructions for information on dose and use.</li> <li>All topical treatments cause inflammation as part of their desired action against abnormal cells patients should be warned to expect such side-effects. If severe then treatments may be stopped until the reaction has subsided and then restarted. Fluorouracil and imiquimod produce a more marked inflammatory reaction than diclofenac but lesions resolve faster.</li> <li>It may be preferable to divide larger areas into smaller ones and treat sequentially.</li> <li>Complete clearance can be delayed for up to several weeks following completion of topical therapies.</li> </ul>				

<sup>1</sup> Cryotherapy is more efficacious than topical drug therapies and is the treatment of choice for discreet areas of AK where available in primary care.

### Cost and product licenses for the pharmacological treatments available

	Licensed use and maximum application area	Price per unit	Course length	Estimated cost
Diclofenac 3% gel (Solaraze)	AK Max. 8g daily (400cm <sup>2</sup> ) (0.5g = 5cm x 5cm)	50g = £38.30	60-90 days	£76.60
Fluorouracil 5% cream (Efudix)	AK Max. 500 cm <sup>2</sup> (approximately 23 x 23 cm).	40 g = £32.90	Usual duration of initial therapy, 3–4 weeks	£32.90 to £65.80
Ingenol cream (Picato)	Non-hyperkeratotic, non-hypertrophic AK in adults Max: 25 cm <sup>2</sup> (e.g. 5 cm x 5 cm).	150 micrograms/g, 3 x 0.47-g single-use tubes = £65.00;  500 micrograms/g, 2 x 0.47-g single-use tubes = £65.00	3 days for face and scalp  2 days for trunk and extremities	£65
Imiquimod (Aldara)	Clinically typical, nonhyperkeratotic, nonhypertrophic AKs on the face or scalp in immunocompetent adult patients when size or number of lesions limit the efficacy and/or acceptability of cryotherapy and other topical treatment options are contraindicated or less appropriate.	12-sachet pack = £48.60.	4 weeks  Course may be repeated after a 4 week treatment-free interval if lesions persist.  Max. 2 courses.	£48.60 to £97.20
Imiquimod (Zyclara)	Clinically typical, nonhyperkeratotic, nonhypertrophic, visible or palpable AK of the full face or balding scalp in immunocompetent adults when other topical treatment options are contraindicated or less appropriate.	28-sachet pack = £113.00.	2 x 2 week courses separated by a 2 week treatment free interval.  Max. 2 sachets daily	£113 to £226

Doses are for general comparison and do not imply therapeutic equivalence.  
 Costs based on prices contained in the British national Formulary no. 74.  
 Licensing and indications based on the Summary of Product Characteristics for each agent.

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<b>Approved by</b>	Mid-Essex Area Prescribing Committee
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<b>Previous version</b>	<b>Key changes</b>
Guideline for the Management of Actinic (Solar) Keratoses in Primary and Secondary Care (no version number)	Document Management added.  Included Picato as a new yellow drug to formulary.  Solaraze and Imiquimod moved to yellow formulary drugs.
ActinicKeratosesGUI201501v1.0final January 2015	Ingenol mebutate (Picato) and 5-Fluorouracil cream moved to green formulary drugs.

Appendix 1

Clinical grading of actinic keratosis (Olsen 1991).

<p><b>Grade I</b></p> <p>Flat, pink maculae without signs of hyperkeratosis and erythema often easier felt than seen. Flat erythematous macules with or without scale and possible pigmentation</p>		
<p><b>Grade II</b></p> <p>Moderately thick hyperkeratosis on background of erythema that are easily felt and seen</p>		

<p><b>Grade III</b></p> <p>Very thick hyperkeratosis, or obvious AK, differential diagnosis cutaneous horn</p>		
<p><b>Field damage</b></p> <p>Large areas of multiple AKs on a background of erythema and sun damage</p>		