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Imiquimod

Imiquimod is an immune response modifier. It is manufactured as a 5% cream called Aldara™. Imiquimod is mainly used to treat [genital warts](#), [solar keratoses](#) and [basal cell skin cancers](#).

Imiquimod works by stimulating the immune system to release a number of chemicals called cytokines, which are important in fighting viruses and destroying cancer cells.

When used to treat [skin cancers](#) and pre-cancerous lesions it results in inflammation, which destroys the lesion. The degree of inflammation is quite variable from person to person, in part due to the type of skin lesion and in part due to genetic factors. The imiquimod is taken up by the so-called 'toll-like receptor 7' on certain immune cells that are found in the outside part of the skin (the epidermis); these receptors are expressed more in some individuals and in some skin lesions than in others.

Imiquimod is particularly useful on areas where surgery or other treatments may be difficult, complicated or otherwise undesirable, especially the face and lower legs.

A course of treatment ranges from 4 to 16 weeks. Before starting, a [biopsy](#) may be performed to confirm the diagnosis. Your doctor should carefully monitor the treatment because you may need to apply the cream more or less frequently than originally planned or for a shorter or longer course, depending on response. Once the inflammation has settled there is generally a good or excellent cosmetic result with little scarring.

Imiquimod is particularly useful for:

- [Solar keratoses](#) (also called actinic keratoses or SKs).
- [Basal cell carcinoma](#) (BCC), especially superficial types
- Bowen's disease, also known as in-situ [squamous cell carcinoma](#) (SCC), an unregistered indication at this time (August 2004)

It is also used to treat viral infections, especially [genital warts](#). It may also be helpful in the treatment of common [warts](#) (once they have been thinned down by other means), plane warts, [molluscum contagiosum](#) and [herpes simplex](#). Experimentally it has been successful in reducing some [keloid](#) scars, [granuloma annulare](#) and [vitiligo](#).

Treatment regimes

Various treatment regimes are used. For example:

- **Solar keratoses** Twice weekly for six weeks, repeated if necessary after a break of four weeks. Very scaly lesions should be frozen with liquid nitrogen about three weeks before starting imiquimod.
- **Basal cell carcinomas and Bowen's disease** Five times weekly for six weeks.

Apply the imiquimod less often if the reaction is excessive, and more often if no reaction occurs. Check with your doctor; he or she may recommend a different regime in your case. Treatment is sometimes continued for up to 16 weeks.

How to use imiquimod cream

Wash your hands before and after applying imiquimod cream.

Cut the top off the sachet or pierce the sachet with a needle and squeeze out a tiny amount of cream onto your fingertip. Apply this to the affected areas.

Although the information on the packet states that the sachet is for single use, you could seal it using a paper clip or tape and store in a closed container to prevent the cream drying out.

Imiquimod may be used at any time of year, as it is not photosensitising. However, when outdoors, you should protect yourself from the sun with [clothing](#) and [sunscreen](#) as usual.

What to expect

Areas treated with imiquimod will become inflamed. The effects include itching, burning, redness, ulceration (sores), scabbing, flaking and pain. These reactions indicate that the cream is likely to be effective – if there is no inflammation, imiquimod is unlikely to clear the lesions. An exaggerated response may clear the skin lesion sooner than expected – sometimes after as few as three or four applications. In some patients, surrounding untreated areas also become inflamed but this will settle when treatment is discontinued.

If you develop a severe reaction with black scabs and ulceration, stop applying the cream and arrange to see your doctor as soon as possible.

Effect of imiquimod



BCC prior to treatment



BCC: During treatment



BCC: After treatment



SKs: Mild reaction



SKs: Moderate reaction



BCC: Severe reaction

Systemic side effects

'Flu-like symptoms may develop, such as fever, fatigue, headache, nausea, diarrhoea and muscle pain. These are generally mild and may be treated with paracetamol. However, if they are troublesome, stop applying imiquimod cream and contact your doctor. Side effects should resolve within a few days of stopping treatment. They may also resolve with continuing treatment.

Make sure you have made an appointment for follow-up with your doctor.

Related information

On Dermnet:

- [Genital warts](#)

- [Basal cell carcinoma](#)
- [Solar keratoses](#)
- [Molluscum Contagiosum](#)
- [Genital herpes](#)

Other websites:

- [Medsafe](#) consumer information on Aldara

References

- Dahl MV. Imiquimod: An immune response modifier. J Am Acad Dermatol 2000; **43**: S1-5. [Medline](#)
- Sauder DN. Immunomodulatory and pharmacologic properties of imiquimod. J Am Acad Dermatol 2000; **43**: S6-11. [Medline](#)
- Edwards L. Imiquimod in clinical practice. J Am Acad Dermatol 2000; **43**: S12-17. [Medline](#)
- Edwards L, Ferenczy A, Eron L, et al. Self-administered topical 5% imiquimod cream for external anogenital warts. Arch Dermatol 1998; **134**: 25-30. [Medline](#)
- Beutner KR, Geisse JK, Helman D, et al. Therapeutic response of basal cell carcinoma to the immune response modifier imiquimod 5% cream. J Am Acad Dermatol 1999; **41**: 1002-7. [Medline](#)
- Mackenzie-Wood A, de Launey J, Kossard S, et al. Safety and efficacy of imiquimod 5% cream for the treatment of Bowen's disease. J Invest Dermatol 1998; **110**: 684 (abstract only).
- Syed TA, Goswami J, Ahmadpour OA, et al. Treatment of molluscum contagiosum in males with an analog of imiquimod 1% in cream: A placebo-controlled, double blind study. J Dermatol 1998; **25**: 309-13. [Medline](#)

Books about skin diseases:

See the [DermNet NZ bookstore](#)

Author 2000: Steven Lamb MBChB Update 2003, 2004 by Darion Rowan FACD & Amanda Oakley FRACP.

DermNet does not provide an on-line consultation service.

If you have any concerns with your skin or its treatment, see a [dermatologist](#) for advice.

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