



## **ACTINIC KERATOSES**

Actinic keratosis (AKs) are skin lesions caused by long-term exposure to the sun and have a higher risk of turning into a skin cancer with time (usually squamous cell skin cancer). They are scaly, rough to the touch, irregularly shaped, and skin-colored, reddish brown, or pink in color. It is not yet possible to tell which AK lesions will go on to become skin cancer.

Experts from the American Cancer Society, the Skin Cancer Foundation, and the American Academy of Dermatology have recommended that all patients with AK lesions be evaluated and undergo some form of treatment. Your dermatologist can determine which type of treatment - either alone or in combination - is right for you.

## **SUN PROTECTION AND OBSERVATION**

Your dermatologists recommend that you use a sunblock, wear a hat and clothing to prevent sun exposure, and have regular skin examinations. Some AKs go away without further treatment, provided that the skin is not subjected to more sun damage. However, regular examinations will help catch the lesions that need to be treated.

## **LESION-TARGETED THERAPIES**

Liquid nitrogen (cryotherapy) destroys AKs by freezing them. This results in sloughing or shedding of the AKs (sometimes through blistering). Cryotherapy is the most common treatment when a patient has a few, small AK lesions. Lesions also may be surgically removed during a visit to your dermatologist. Surgical removal is usually used for large lesions or if an AK of any size looks suspicious and must be sent to a laboratory for further examination. Other lesion-targeted therapies include electrodesiccation (drying out the lesion with a safe electrical current) and laser therapy.

## **TOPICAL CHEMOTHERAPY**

5-Fluorouracil (5-FU) is a topical chemotherapy medicine that has been used for many years to treat AKs. This agent destroys AKs by killing the damaged cells. 5-FU is a cream that is

prescribed and the patient applies it at home to an entire area of skin in which AKs have developed, not just to the individual lesions (usually for 1-4 weeks). This makes 5-FU an especially good option for patients who have many lesions.

5-FU also differs from the lesion-targeted therapies because it treats both the lesions that are visible and those that are forming in the skin but have not yet become apparent

For this reason, 5-FU is referred to as a field therapy. Within about a week of starting 5-FU therapy, AKs will "light up," a term used to describe the gradual reddening that occurs. In addition, other areas may light up, indicating that hidden lesions are present and that the medicine is working to eliminate these AKs as well.

## PHOTODYNAMIC THERAPY

Another field therapy treatment available is photodynamic therapy (PDT). Like topical 5-FU (above), it is particularly useful for eliminating multiple lesions. For PDT, the patient comes into the office and a topical medicine, aminolevulinic acid (ALA), is applied to an area (like scalp or face). Then a couple hours later, the lesions are exposed to a special blue light for less than 20 minutes. The light source activates ALA and causes a chemical reaction in the skin that kills the AK cells. Like topical 5-FU above, the skin "lights up" with redness and irritation.

## IMMUNE TREATMENT

Aldara/Zyclara cream activates your immune system to help fight certain skin disorders including actinic keratosis, superficial basal cell carcinoma, and external genital warts.

Responses to Aldara Cream vary from person to person. Most people experience redness, swelling, itching, flaking, or scabbing at or around the application site during the course of treatment. Treatment with Aldara Cream may also result in swelling, small open sores and drainage. You may also experience itching and/or burning. AKs that were not seen before may appear during treatment and may later go away.

## TREATMENT SIDE EFFECTS

All of the treatments above are associated with some discomfort. Cryotherapy causes a stinging and burning sensation at the time that liquid nitrogen is applied. PDT also causes stinging and burning, which is worst just after the skin is exposed to the blue light. In most cases, the discomfort is mild and goes away quickly. The side effects from 5-FU include irritation of the skin, which often is associated with stinging and burning. Treated areas may

also ooze and become dry and flaky. These effects are normal and expected reactions to 5-FU and show that the chemotherapy is working. Any treatment can take 1-4 weeks to heal. Appearance is a concern for many patients when the face or scalp is being treated, particularly if the treatment area is large. For this reason, patients who are having treatment of the face or scalp often schedule therapy so that they can take time off from work during the days when the skin reaction is likely to be most severe. Your dermatologist can guide you in planning and also will instruct you on how to care for your skin during treatment to minimize discomfort