

[Home](#) > [Navigating Cancer Care](#) > [Side Effects](#) > [Skin Reactions to Targeted Therapies](#)

Printed January 26, 2015 from <http://www.cancer.net/navigating-cancer-care/side-effects/skin-reactions-targeted-therapies>

## **Skin Reactions to Targeted Therapies** [1]

This section has been reviewed and approved by the [Cancer.Net Editorial Board](#) [2], 09/2011

Targeted therapy is a treatment that targets faulty genes, proteins, or the tissue environment that contributes to cancer growth and development. Compared with conventional [chemotherapy](#) [3], targeted therapies are more specific and cause fewer side effects, such as infections, weakness, and changes to blood counts. However, patients receiving a targeted therapy often develop skin, hair, nail, and/or eye problems.

There are often effective ways to treat these side effects. Patients taking a targeted therapy drug are encouraged to talk with their doctor on a regular basis about special precautions they should take, signs and symptoms to watch for, and what to do if a reaction appears.

These skin, nail, hair and/or eye side effects are caused by the drugs' effect on the normal growth of these normal tissues. Specific side effects to the skin, hair, and nails depend on the drug that the person receives.

### **Drugs that target EGFR**

A common type of targeted therapy is directed against a molecule known as epidermal growth factor receptor (EGFR). Although EGFR fuels the growth of cancer cells, it also plays a role in the normal growth of the skin, hair, and nails. That means rashes and changes to the hair and nails may occur after treatment with these drugs, including cetuximab (Erbix), erlotinib (Tarceva), panitumumab (Vectibix) and lapatinib (Tykerb).

Overall, these side effects are often managed in most patients so that appearance of the skin, hair, and nails stays the same or are only slightly affected, and treatment can continue. It is important to note that the skin side effects associated with these drugs are not allergic reactions or infections.

### **General signs and symptoms**

If you are prescribed a targeted therapy, talk with your doctor about what to expect about possible side effects, including how they will be treated if they do appear. Common signs and symptoms are outlined below.

Most patients taking drugs that target EGFR develop a rash on the face and upper body. It usually occurs within the first few weeks of taking these medications. Before the rash appears, there may be redness or a warm sensation of the skin on the face that may feel like sunburn. After several days, tender pimples and pus bumps appear, and the surrounding skin feels slightly tender. Rashes tend to be mild to moderate, but in some cases they are severe and cause significant physical and cosmetic discomfort.

Other symptoms may include the following:

- Pimples and red bumps on the face, neck, and upper chest or back; at times, the pimples may itch
- Tenderness in facial skin, with a sunburn-like sensation
- Itching of the skin, especially the scalp
- Tender sores inside the nose, corners of the mouth, or eyes
- Painful inflammation around nails, especially the thumbs and big toes
- Nails that become brittle and may loosen from the nail bed
- Fissures of the fingertips, which are similar to paper cuts
- Hair loss over the entire scalp and reduced hair on legs or arms
- Increased growth and curling of the eyelashes and eyebrows
- Increased facial hair growth
- Easy bruising of the skin
- Dry, flaky skin
- Dry, itchy eyes

The skin can also become very tender and itchy, interfering with daily activities and sleep. Vigorous scratching can result in breaks that may make the skin more prone to infections. The inflammation around the nails can make grooming, dressing, and other activities painful or difficult.

### **Sorafenib and sunitinib symptoms**

Sorafenib (Nexavar) and sunitinib (Sutent) are two drugs that interact with multiple targets to stop or slow cancer growth. Most skin reactions are mild and manageable. However, 20% to 40% of people taking these drugs experience painful, thickened areas of skin on the hands and feet that may blister. These areas may also become tender to the point that they interfere with the person's daily activities, such as walking or holding objects.

In 20% to 40% of patients, a rash that may involve redness and a sensation of warmth or burning on the face or scalp occurs. Mild hair loss may be a side effect for up to 25% of patients on sorafenib, but it tends to be mild. Dry skin is also common and should be treated early to prevent the development of itching.

### **Vemurafenib (Zelboraf) symptoms**

With vemurafenib (Zelboraf), up to 40% of people can develop a rash on the upper body, including the face. This rash involves the appearance of flat red spots. Even though this may be difficult for the patient, it is not recommended that patients stop taking the drug.

People may also develop thick calluses on the palms and soles, especially the heels and balls of the foot (in about one-third of people taking vemurafenib) and/or some type of skin growth (in about 20% of people). These skin growths usually appear within the second and third month of treatment and affect the face, chest, and upper back. Although it is possible that some of these are skin cancers, they are a type of cancer that does not spread and is not dangerous to a person's health.

### **Ipilimumab (Yervoy)**

This drug stimulates the immune system in a person's body to become overactive and attack cancer cells. For about one-third of people taking this drug, the immune system reaction may cause rashes and itching on the skin. The rash is usually characterized by red bumps on the face and torso. The itching occurs on the legs, and sometimes the entire body, and it can be very bothersome, especially at night.

Another condition that may appear is pale spots on the skin or graying of the hair. This side effect is a result of the drug attaching to the cells that give skin its color. Interestingly, this side effect is also a sign the drug may be working well.

### **Everolimus (Afinitor) and temsirolimus (Torisel)**

One out of five people can develop a bumpy rash on the arms and sometimes the legs. Usually appearing within the first few months of treatment, the rash heals without scarring. With these drugs, mouth sores that look like canker sores (called aphthous ulcers) will affect up to a third of people. These usually appear at the beginning and then go away over time.

### **Managing and relieving these reactions**

Although rashes, dry skin, and nail and hair reactions are rarely severe, they often cause significant discomfort to the patient. In some cases, the patient may even want to stop cancer treatment because of these reactions. Therefore, it is important to talk with your doctor beforehand about what to expect and also tell your doctor as soon as you start feeling or seeing any such side effects. Early and effective treatments for these reactions are available. Health professionals who can help include an oncologist, oncology nurse, dermatologist (a doctor who specializes in skin problems), or ophthalmologist (a medical doctor who specializes in diseases and function of the eye).

The following suggestions may help avoid reactions and help relieve them if they do happen:

- Before you begin treatment, talk with your oncologist or a dermatologist to learn about its side effects. Ask what to do if a rash or other problems appear (such as how to get a prescription filled or the best way to see the doctor).
- At the first sign of a developing a reaction (such as a warm or burning sensation, pimples, nail

fissures, or dry skin), tell your doctor or a dermatologist familiar with these reactions.

- Avoid the sun, and use a sunscreen with a high sun protection factor (SPF). Ideally, the SPF should be at least 15, and the sunscreen should contain zinc oxide. It should be applied every two hours or more frequently if sweating or swimming.
- Remember to use enough sunscreen. Apply more than half a teaspoon of sunscreen to each arm, the face and neck, and just over one teaspoon to the chest and abdomen, back, and each leg.
- Use a broad-brimmed hat if going outside and avoid being in direct sunlight between 10 AM and 4 PM.
- Use a mild soap in the shower, and avoid soaps with strong scents. Shower with lukewarm water and avoid long, hot showers. Also, avoid laundry detergent with strong perfumes.
- Apply a moisturizer within 15 minutes of showering or bathing to dry areas. Use hypoallergenic moisturizers that do not have perfumes or preservatives (such as Vanicream, Aveeno, CeraVe, Cetaphil, and Eucerin).
- Avoid anti-acne skin products containing alcohol, benzoyl peroxide, or retinoids, because they can dry out your skin.
- Your doctor may prescribe topical medicated creams, such as corticosteroids (alclometasone [Aclovate] or mometasone [Elocon, Momexin]) to effectively relieve symptoms of rash. A prescription is required for these drugs. In cases when the rash is very severe or covers a large area of the body, oral corticosteroids may be needed (such as prednisone or dexamethasone [multiple brand names]).
- Antibiotics in the tetracycline family (such as doxycycline and minocycline), usually taken two to four weeks in pill form, are an effective therapy for rashes and nail tenderness when taking cetuximab, erlotinib, panitumumab, and lapatinib.
- Whenever there is discharge of pus, your doctor may want a sample for a culture to determine the appropriate antibiotic treatment.
- When the skin is very dry and flaky, your dermatologist may prescribe a moisturizer containing urea or lactic acid. However, do not apply this type of moisturizer to sensitive or red areas of the skin.
- For the hand/foot skin reaction to sorafenib and sunitinib, use creams containing urea (carmol 20 or carmol 40), salicylic acid (Salex cream kit), or high potency corticosteroids (fluocinonide [multiple brand names], clobetasol [multiple brand names]). Gel insoles may also help. In addition, do your best to protect against injury or putting too much weight on hands and feet, especially during the first two months of treatment.
- For itching in one specific area (called localized itching), a cream containing a corticosteroid (alclometasone or mometasone) or an anesthetic (numbing medicine, such as lidocaine 2% or pramoxine [multiple brand names]) can be applied several times a day. For more generalized itching or itching that affects sleep, an antihistamine pill, such as cetirizine (Zyrtec) or diphenhydramine (Benadryl), can be taken as needed.

### Summary of Targeted Therapies and Common Side Effects

Drug	Types of cancers for which drug may be prescribed	Side effects
------	---	--------------

<p>Erlotinib</p> <p>Gefitinib</p> <p>Cetuximab</p> <p>Panitumumab</p>	<ul style="list-style-type: none"> <li>• Colorectal</li> <li>• Head/neck</li> <li>• Lung</li> <li>• Pancreas</li> </ul>	<ul style="list-style-type: none"> <li>• Rash on face and upper body</li> <li>• Inflammation around fingernails</li> <li>• Dry, itchy skin</li> <li>• Hair loss on scalp</li> <li>• Increased hair on face and eyelashes</li> </ul>
<p>Sorafenib</p> <p>Sunitinib</p>	<ul style="list-style-type: none"> <li>• Renal cell cancer (a type of kidney cancer)</li> <li>• Gastrointestinal stromal tumor (GIST)</li> <li>• Hepatocellular cancer (a type of liver cancer)</li> </ul>	<ul style="list-style-type: none"> <li>• Hand/foot skin reactions (tender, thicker areas sometimes with blisters on palms and soles)</li> <li>• Redness and flaking on scalp and eyebrows</li> <li>• Warm, burning sensation on face along with redness</li> <li>• Dry, itchy skin</li> <li>• Hair loss on scalp</li> </ul>
<p>Ipilimumab (Yervoy)</p>	<ul style="list-style-type: none"> <li>• Melanoma</li> </ul>	<ul style="list-style-type: none"> <li>• Bumpy red rash</li> <li>• Itching</li> <li>• Pale skin patches and gray hair</li> </ul>
<p>Vemurafenib (Zelboraf)</p>	<ul style="list-style-type: none"> <li>• Melanoma</li> </ul>	<ul style="list-style-type: none"> <li>• Red rash on face and upper body</li> <li>• Hand/foot skin reactions (tender, thicker areas sometimes with blisters on palms and soles)</li> <li>• Skin growths, including non-dangerous moles and cancers</li> </ul>

<p>Everolimus (Afinitor) and Temsirolimus (Torisel)</p>	<ul style="list-style-type: none"> <li>• Renal cell cancer (a type of kidney cancer)</li> <li>• Pancreatic neuroendocrine tumor (a type of pancreas cancer)</li> <li>• Subependymal giant cell astrocytoma (SEGA), a benign brain tumor associated with <u>tuberous sclerosis</u> [4]</li> </ul>	<ul style="list-style-type: none"> <li>• Mouth sores (like canker sores)</li> <li>• Bumpy rash on upper body</li> </ul>
---	--	---

## More Information

[Managing Side Effects](#) [5]

[Understanding Targeted Treatments](#) [6]

---

### Links:

[1] <http://www.cancer.net/navigating-cancer-care/side-effects/skin-reactions-targeted-therapies>

[2] <http://www.cancer.net/about-us>

[3] <http://www.cancer.net/node/24723>

[4] <http://www.cancer.net/node/19686>

[5] <http://www.cancer.net/node/25238>

[6] <http://www.cancer.net/node/24729>