Erlotinib (Tarceva®)

Pronounced: er-LOE-ti-nib

Classification: Tyrosine Kinase Inhibitor

About Erlotinib (Tarceva®)

A kinase is an enzyme that promotes cell growth. There are many types of kinases, which control different phases of cell growth. By blocking a particular enzyme from working, this medication can slow the growth of cancer cells.

Erlotinib is a small molecule drug that inhibits tyrosine kinase, an enzyme associated with the human epidermal growth factor receptor (EGFR). In some cancers, this receptor is overactive, causing cells to grow and divide too fast. By inhibiting EGFR, erlotinib prevents the uncontrolled growth of cells that contributes to tumor growth. Your oncology team will test your tumor for this abnormality, which must be present in order to receive the medication.

How to Take Erlotinib

Erlotinib is taken by mouth, in tablet form, once a day. It is usually taken on an empty stomach, at least 1 hour before or 2 hours after eating a meal or snack. Take erlotinib at around the same time every day. Take the tablet whole, do not break, crush or chew. If you miss a dose, do not take two doses to make up for a missed dose. If you vomit after taking your dose, do not take another dose. Take the next dose at its normally scheduled time. Consult with your pharmacist or provider if you are having trouble swallowing the medication.

It is important to make sure you are taking the correct amount of medication every time. Before every dose, check that what you are taking matches what you have been prescribed.

The blood levels of this medication can be affected by certain foods and medications, so they should be avoided. These include: grapefruit, grapefruit juice, verapamil, ketoconazole, rifampin, phenytoin, St. John’s wort, warfarin, and modafanil. Be sure to tell your healthcare provider about all medications and supplements you take.

You should not take erlotinib at the same time as "heartburn" medications, as these may affect how your cancer medication is absorbed. These include proton pump inhibitors such as Prilosec (omeprazole), Nexium (pantoprazole), Protonix (pantoprazole); H2 blockers, such as Pecid (famotidine); and antacids, such as Tums (calcium-carbonate) and Rolaid's (Calcium Carbonate and Magnesium Hydroxide). If needed, please ask your care team the best “heartburn” medication to use and when to take it.

The blood levels of this medication can also be impacted by cigarette smoking. Be sure to inform your healthcare provider if you are currently smoking, or if you quit smoking while taking this medication, as the dose you receive may need to be adjusted.

For Patients Taking Blood Thinners

This medication can interact with blood thinning medications, such as warfarin (Coumadin). The combination of these medicines can cause your blood to take longer to clot, which can increase the risk of serious bleeding. Your healthcare provider will monitor your INR (blood test to measure clotting time) frequently. Be sure to report any bleeding to your provider.

Storage and Handling

Store your medication in the original, labeled container at room temperature and in a dry location (unless otherwise directed by your healthcare provider or pharmacist). This medication should not be stored in a pillbox. Keep containers out of reach of...
children and pets.

If a caregiver prepares your dose for you, they should consider wearing gloves or pour the pills directly from their container into the cap, a small cup, or directly into your hand. They should avoid touching the pills. They should always wash their hands before and after giving you the medication. Pregnant or nursing women should not prepare the dose for you. Ask your oncology team where to return any unused medication for disposal. Do not flush down the toilet or throw in the trash.

**Where do I get this medication?**

Erlotinib is available through select specialty pharmacies. Your oncology team will work with your prescription drug plan to identify an in-network specialty pharmacy for distribution of this medication and shipment directly to your home.

**Insurance Information**

This medication may be covered under your prescription drug plan. Patient assistance may be available to qualifying individuals depending upon prescription drug coverage. Co-pay cards, which reduce the patient co-pay responsibility for eligible commercially (non-government sponsored) insured patients, may also be available. Your care team can help you find these resources, if they are available.

**Possible Side Effects of Erlotinib**

There are a number of things you can do to manage the side effects of erlotinib. Talk to your care team about these recommendations. They can help you decide what will work best for you. These are some of the most common or important side effects:

**Nail and Skin Changes**

Erlotinib has some unique nail and skin side effects that you may develop. Patients may develop a rash. While this rash may look like acne, it is not, and should **not** be treated with acne medications. The rash may appear red, swollen, crusty, dry and feel sore. You may also develop very dry or darkened skin, which may crack, be itchy or become flaky or scaly. The rash typically starts in the first week of treatment, but can occur at any time during treatment. Tips for managing your skin include:

- Use a thick, alcohol-free emollient lotion or cream on your skin at least twice a day, including right after bathing.
- Avoid sun exposure, as it can worsen the rash or cause a severe burn. Use a sunscreen with an SPF of 30 or higher and wear a hat and sunglasses to protect your head and face from the sun.
- Bathe/shower in cool or lukewarm (not hot) water and pat your skin dry.
- Use soaps, lotions and laundry detergents without alcohol, perfumes or dyes.
- Wear gloves to wash dishes or do housework or gardening.
- Drink plenty of water and try not to scratch or rub your skin.
- Notify your healthcare team if you develop a rash, as they can provide suggestions to manage the rash and/or prescribe a topical medication to apply to the rash or an oral medication.
- If you develop peeling or blistering of the skin, notify your healthcare team right away.

While receiving erlotinib, you may develop an inflammation of the skin around the nail bed/cuticle areas of toes or fingers, which is called paronychia. It can appear red, swollen or pus filled. Nails may develop "ridges" in them or fall off. You may also develop cuts or cracks that look like small paper cuts in the skin on your toes, fingers or knuckles. These side effects may appear several months after starting treatment, but can last for many months after treatment stops.

- Follow the same recommendations for your skin (above).
- Don’t bite your nails or cuticles or cut the cuticles.
- Keep your fingernails and toenails clean and dry.
- You may use nail polish, but do not wear fake nails.
- Notify your doctor or nurse if any nails fall off or you develop any of these side effects or other skin abnormalities.

**Diarrhea**
Your oncology care team can recommend medications to relieve diarrhea. Also, try eating low-fiber, bland foods, such as white rice and boiled or baked chicken. Avoid raw fruits, vegetables, whole grain breads, cereals and seeds. Soluble fiber is found in some foods and absorbs fluid, which can help relieve diarrhea. Foods high in soluble fiber include: applesauce, bananas (ripe), canned fruit, orange sections, boiled potatoes, white rice, products made with white flour, oatmeal, cream of rice, cream of wheat, and farina. Drink 8-10 glasses on non-alcoholic, un-caffeinated fluid a day to prevent dehydration.

**Fatigue**

Fatigue is very common during cancer treatment and is an overwhelming feeling of exhaustion that is not usually relieved by rest. While on cancer treatment, and for a period after, you may need to adjust your schedule to manage fatigue. Plan times to rest during the day and conserve energy for more important activities. Exercise can help combat fatigue; a simple daily walk with a friend can help. Talk to your healthcare team for helpful tips on dealing with this side effect.

**Decrease in Appetite**

Nutrition is an important part of your care. Cancer treatment can affect your appetite and, in some cases, the side effects of treatment can make eating difficult. Ask your oncology care team about nutritional counseling services at your treatment center to help with food choices.

- Try to eat five or six small meals or snacks throughout the day, instead of 3 larger meals.
- If you are not eating enough, nutritional supplements may help.
- You may experience a metallic taste or find that food has no taste at all. You may dislike foods or beverages that you liked before receiving cancer treatment. These symptoms can last for several months or longer after treatment ends.
- Avoid any food that you think smells or tastes bad. If red meat is a problem, eat chicken, turkey, eggs, dairy products and fish without a strong smell. Sometimes cold food has less of an odor.
- Add extra flavor to meat or fish by marinating it in sweet juices, sweet and sour sauce or dressings. Use seasonings like basil, oregano or rosemary to add flavor. Bacon, ham and onion can add flavor to vegetables.

**Nausea and/or Vomiting**

Talk to your oncology care team so they can prescribe medications to help you manage nausea and vomiting. In addition, dietary changes may help. Avoid things that may worsen the symptoms, such as heavy or greasy/fatty, spicy or acidic foods (lemons, tomatoes, oranges). Try saltines, or ginger ale to lessen symptoms.

Call your oncology care team if you are unable to keep fluids down for more than 12 hours or if you feel lightheaded or dizzy at any time.

**Less common, but important side effects can include:**

- **Eye Concerns:** While receiving erlotinib, some patients may develop irritation or damage to the cornea (clear part covers the eyeball) or changes in your eyesight. Notify your healthcare team if you develop any eye pain, swelling, redness or any vision changes, including blurriness and sensitivity to light.
- **Gastrointestinal Perforation:** This medication can cause a tear in the intestinal wall, also called a gastrointestinal perforation. Signs of this can include: new or worsening pain in the abdomen, new abdominal swelling, chills, fever, constipation, nausea or vomiting. If you experience any of these, contact your healthcare provider immediately or go to the emergency room.
- **Lung Changes:** Erlotinib can cause lung problems, including interstitial lung disease. Call your physician right away if you have shortness of breath, cough, wheezing, difficulty breathing, or fever.
- **Renal Toxicity:** This medication can cause kidney toxicity, which your doctor may monitor for using blood tests to check your creatinine level. Notify your healthcare provider if you notice decreased urine output, blood in your urine, swelling in the ankles or loss of appetite.
- **Liver Toxicity:** This medication can cause liver toxicity, which your doctor may monitor for using blood tests called liver function tests. Notify your healthcare provider if you notice yellowing of the skin or eyes, your urine appears dark or brown or pain in your abdomen, as these can be signs of liver toxicity.
- **Heart Attack and Stroke:** Erlotinib can increase the risk of stroke and heart attack. If you experience symptoms of these
problems, you should contact your healthcare provider immediately or go to an emergency room. Symptoms can include: chest pain or pressure, pain in your arm, back, neck or jaw, shortness of breath, numbness or weakness on one side of the body, trouble talking, confusion or mental status changes.

Reproductive Concerns
Exposure of an unborn child to this medication could cause birth defects, so you should not become pregnant or father a child while on this medication. Effective birth control is necessary during treatment and for at least 1 month after treatment. Even if your menstrual cycle stops or you believe you are not producing sperm, you could still be fertile and conceive. Women should not breastfeed during treatment and for 2 weeks after the final erlotinib dose.