Vemurafenib (Zelboraf®)

Pronounced: VEM-ue-RAF-e-nib

Classification: BRAF Kinase Inhibitor

About Vemurafenib (Zelboraf®)

BRAF is a protein kinase that plays a role in regulating genes that are responsible for cell replication and survival. This mutated form of BRAF promotes overgrowth of these cancer cells. Vemurafenib works by blocking the actions of the abnormal BRAF, inhibiting cell replication and potentially causing cell death.

How to Take Vemurafenib

Vemurafenib is given in a tablet form and taken twice a day. You will need to take several tablets to get the full dose. Vemurafenib tablets should be taken whole, with a glass of water, and should not be crushed, broken or chewed. They can be taken with or without food. If you miss a dose, you can take the dose up to 4 hours before the next scheduled dose. Do not take two doses at once to make up for a missed dose.

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’swort, modafanil, and many others. Be sure to tell your healthcare provider about all medications and supplements you take.

Because this medication only works in melanoma that has a specific BRAF mutation, called V600E, this abnormality must be tested for prior to starting the medication to identify patients appropriate for therapy. In order to test for mutated BRAF, a sample of the tumor is sent to a special laboratory that performs this test.

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?

Depending on your prescription coverage, this medication may be available at your local retail pharmacy or through a specialty pharmacy. Your oncology team will work with your prescription drug plan to identify the appropriate supplier for this medication.

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 Vemurafenib

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

**Sun Sensitivity**

This medication can make your skin more sensitive to the sun, which can result in severe sunburn or rash. Sun sensitivity can last even after chemotherapy is completed. Avoid the sun between 10-2pm, when it is strongest. Wear sunscreen (at least SPF 30) everyday; wear sunglasses, a hat and long sleeves/pants to protect your skin and seek out shade whenever possible.

Notify your care team if you develop red, painful or itchy skin, "sunburn", skin irritation, bumps or thick, dry skin.

**Rash and Allergic Reactions**

Some patients can develop a reaction to vemurafenib, which can include rash (on any part of your skin including inside your mouth or the soles of your feet), skin redness, blistering, peeling or a serious allergic reaction causing difficulty breathing, rapid heartbeat, swelling or fever. If you have any side effects while taking this medication, inform your oncology team right away or go to the emergency room.

**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.

**Muscle or Joint Pain/Aches and Headache**

Your healthcare provider can recommend medication and other strategies to relieve pain.

**Nausea and/or Vomiting**

Talk to your doctor or nurse 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 antacids, (e.g. milk of magnesia, calcium tablets such as Tums), saltines, or ginger ale to lessen symptoms.

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

**Loss or Thinning of Scalp and Body Hair (Alopecia)**

Your hair may become thin, brittle, or may fall out. This typically begins two to three weeks after treatment starts. This hair loss can be all body hair, including pubic, underarm, legs/arms, eyelashes, and nose hairs. The use of scarves, wigs, hats and hairpieces may help. Hair generally starts to regrow soon after treatment is completed. Remember your hair helps keep you warm in cold weather, so a hat is particularly important in cold weather or to protect you from the sun.

**Diarrhea**

Your oncology 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 of non-alcoholic, un-caffeinated fluid a day to prevent dehydration.

**New Skin Cancer**

In clinical trials, some patients developed a new skin cancer (Basal cell or squamous cell cancer). You should have skin examinations prior to starting treatment, and then every 2 months while on therapy, and for 6 months after the medication has been stopped. Check your own skin regularly and report any new growths, sores or bumps that bleed or do not heal, or notice
any changes in moles to your healthcare provider.

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

- **Heart Problems:** This medication can affect the electrical activity in your heart, causing an abnormal heart rhythm called QT prolongation. Notify your healthcare provider right away if you feel abnormal heartbeats or if you feel dizzy, lightheaded, or faint.

- **Eye Issues:** Some patients developed a condition called uveitis, which is a swelling or irritation of the middle layer of the eye. Symptoms of this condition include blurry vision, "floaters" (dark spots in the field of vision), eye redness or pain, and sensitivity to light. If you develop any of these symptoms, notify your healthcare provider right away.

- **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.

- **Radiation Recall:** Radiation recall is when the administration of a medication causes a skin reaction, that looks like a sunburn (redness, swelling, soreness, peeling skin), in areas where radiation was previously given. Radiation sensitization can occur when radiation is given at the same time or after treatment with this medication and can cause the same type of reaction. Notify your oncology team if you notice this side effect or if you plan to have radiation therapy.

- **Stevens Johnson Syndrome:** A rare, but serious, allergic reaction that affects the skin and mucous membranes. It typically starts as a rash or painful blisters and can progress to serious damage to the skin and in some cases, death. It is important that you report any rash to your oncology care team immediately.

- **Secondary Cancers:** A secondary cancer is one that develops as a result of cancer treatment for another cancer. This is quite rare, but you should be aware of the risk. In most cases, a secondary cancer related to chemotherapy is a blood cancer (leukemia, lymphoma). This can occur years after treatment. This is most often associated with repeated treatments or high doses. Your provider will monitor your labs closely. Consider having a complete blood count with differential checked annually by your healthcare provider if you received high risk therapies.

- **Kidney Problems:** This medication can cause kidney problems, including an kidney failure, which your oncology care team may monitor for using blood tests. Notify your healthcare provider if you notice decreased urine output, blood in the urine, swelling in the ankles, or loss of appetite.

- **Dupuytren’s Contracture/Plantar Fascial Fibromatosis:** Duputren’s contracture causes the tissue under the skin to thicken, which pulls the fingers towards the palm. Plantar Fascial Fibromatosis is a thickening of tissue in the foot. If you start to have trouble moving your hands or your feet you should contact your provider right away.

**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 2 weeks after treatment. Even if your menstrual cycle stops or you believe you are not producing sperm, you could still be fertile and conceive. This medication can be passed in breast milk. Do not breastfeed during treatment and for two weeks after receiving your final dose.