Imatinib (Gleevec®)

Pronounced: i-MA-tin-ib

Classification: Tyrosine Kinase Inhibitor

About Imatinib (Gleevec®)

Imatinib is a tyrosine kinase inhibitor. 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. Imatinib works by blocking signals within cancer cells, which prevents a series of chemical reactions that allow the cell to grow and divide.

How to Take Imatinib

Imatinib comes as a tablet you take by mouth. Your dose will depend on your diagnosis. Take each dose with a glass of water and a meal. Imatinib may be dissolved in water or apple juice if you have trouble swallowing the tablets. Use approximately 50ml of liquid for a 100mg tablet and 200ml for a 400mg tablet and drink immediately after the tablet disintegrates completely. Take imatinib at around the same time(s) every day.

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.

Certain medications/foods/supplements are broken down by the same enzymes as imatinib. This can cause the blood levels of these medications, or the blood levels of imatinib, to be higher or lower than expected. These include: grapefruit, grapefruit juice, acetaminophen (Tylenol), warfarin (Coumadin), several cholesterol medications, certain antibiotics, St. John’s wort, and some anti-seizure medications. Be sure to tell your healthcare provider about all medications and supplements you take.

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?

Imatinib is available through retail or mail order pharmacy. Your oncology team will work with your prescription drug plan to identify an in-network, retail or mail order pharmacy for medication distribution.

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 Imatinib**

There are a number of things you can do to manage the side effects of imatinib. 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:

**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.

**Diarrhea**

Diarrhea can be a serious side effect that can lead to dehydration. Notify your care team if you develop 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.

**Rash**

Some patients may develop a rash or very dry skin. Use an alcohol free moisturizer on your skin and lips; avoid moisturizers with perfumes or scents. Your doctor or nurse can recommend a topical medication if itching is bothersome. If your skin does crack or bleed, be sure to keep the area clean to avoid infection. Be sure to notify your healthcare provider of any rash that develops, as this can be a reaction. They can give you more tips on caring for your skin.

**Low White Blood Cell Count (Leukopenia or Neutropenia)**

White blood cells (WBC) are important for fighting infection. While receiving treatment, your WBC count can drop, putting you at a higher risk of getting an infection. You should let your doctor or nurse know right away if you have a fever (temperature greater than 100.4°F or 38°C), sore throat or cold, shortness of breath, cough, burning with urination, or a sore that doesn’t heal.

**Tips to preventing infection:**

- Washing hands, both yours and your visitors, is the best way to prevent the spread of infection.
- Avoid large crowds and people who are sick (i.e.: those who have a cold, fever or cough or live with someone with these symptoms).
- When working in your yard, wear protective clothing including long pants and gloves.
- Do not handle pet waste.
- Keep all cuts or scratches clean.
- Shower or bath daily and perform frequent mouth care.
- Do not cut cuticles or ingrown nails. You may wear nail polish, but not fake nails.
- Ask your oncology care team before scheduling dental appointments or procedures.
- Ask your oncology care team before you, or someone you live with, has any vaccinations.

**Low Red Blood Cell Count (Anemia)**

Your red blood cells are responsible for carrying oxygen to the tissues in your body. When the red cell count is low, you may feel tired or weak. You should let your oncology care team know if you experience any shortness of breath, difficulty breathing or pain in your chest. If the count gets too low, you may receive a blood transfusion.
**Low Platelet Count (Thrombocytopenia)**

Platelets help your blood clot, so when the count is low you are at a higher risk of bleeding. Let your oncology care team know if you have any excess bruising or bleeding, including nose bleeds, bleeding gums or blood in your urine or stool. If the platelet count becomes too low, you may receive a transfusion of platelets.

- Do not use a razor (an electric razor is fine).
- Avoid contact sports and activities that can result in injury or bleeding.
- Do not take aspirin (salicylic acid), non-steroidal, anti-inflammatory medications (NSAIDs) such as Motrin/Advil (ibuprofen), Aleve (naproxen), Celebrex (celecoxib) etc. as these can all increase the risk of bleeding. Please consult with your healthcare team regarding use of these agents and all over the counter medications/supplements while on therapy.
- Do not floss or use toothpicks and use a soft-bristle toothbrush to brush your teeth.

**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.

**Edema**

Some patients experience swelling around the eyes or in the legs or feet due to fluid retention in the tissues. Fluid can also build up in the lungs or heart. Notify your healthcare team if you develop swelling, have unexpected weight gain, chest pain or shortness of breath. Your doctor may prescribe a diuretic (medication which causes you to produce more urine) to help get rid of some of the excess fluid.

**Muscle Cramps**

Some patients develop mild muscle aches, cramps, spasms or pain in their legs or feet while taking imatinib. Let your healthcare team know. These aches and cramps can usually be managed with calcium and magnesium supplements or mild pain medications, such as ibuprofen.

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

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

**Driving or Operating Machinery**

Some patients may experience dizziness, sleepiness or blurred vision while taking this medication. You should use caution when driving or operating machinery until you know how this medication will affect you.

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

- **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.
- **Skin Reactions:** Imatinib can cause severe skin reactions. Notify your oncology team if you develop sores or ulcers on your skin, lips, or in your mouth, or if you develop a rash, blisters, or peeling skin.
- **Thyroid Problems:** This medication can cause hypothyroidism (under active thyroid) in patients who have had their thyroid removed (thyroidectomy). Your doctor will perform blood tests to check the function of your thyroid if you are taking thyroid hormone replacement (levothyroxine).
- **Heart Problems:** Imatinib can cause or worsen pre-existing heart problems including congestive heart failure and left ventricular dysfunction. Notify your healthcare provider if you have sudden weight gain or swelling in the ankles or legs. If you develop chest pain or pressure, pain in the left arm, back, or jaw, sweating, shortness of breath, clammy skin, nausea, dizziness or lightheadedness, call 911 or go to the nearest emergency room.
- **GI Bleed and Tear:** This medication can cause bleeding or a tear in the intestinal wall. Signs of these problems include: unexpected bleeding, blood in the stool or black stools, coughing up blood, vomiting blood, vomit that looks like coffee.
grounds, fever, severe pain in the abdomen or new abdominal swelling. If you experience any of these, contact your healthcare provider immediately or go to the emergency room.

- **Tumor Lysis Syndrome:** If there are a large amount of tumor cells in your body prior to treatment, you are at risk for tumor lysis syndrome. This happens when the tumor cells die too quickly and their waste overwhelms the body. You may be given a medication (allopurinol) and IV fluids to help prevent this. If you experience nausea, vomiting, diarrhea or become lethargic (drowsy, sluggish), notify your oncology team right away. TLS can affect your kidney function. Your provider will monitor your kidney function with blood work. Notify your provider if you have little or no urine output.

- **Kidney Problems:** This medication can cause kidney problems, including an increased creatinine level, 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.

**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 two weeks after treatment. Even if your menstrual cycle stops or you believe you are not producing sperm, you could still be fertile and conceive. You should consult with your healthcare team before breastfeeding while receiving this medication. You should not breastfeed while receiving this medication or for one month after your last dose.