Targeted Therapies for Chronic Myeloid Leukemia Chronic myeloid leukemia (CML.) cells contain an abnormal gene, BCR–ABL, that isn't found in normal cells.Some patients may experience an infusion reaction, like an allergic reaction, causing fever, chills, facial flushing, rash, itching skin, vertigo, asthma, and breathing difficulties.The patient cannot eat 2 hours before taking nilotinib and for 1 hour after taking it. Side effects of nilotinib: Side effects of nilotinib seem to be mild but can include fluid build–up, lowered blood cell counts, nausea, diarrhea, rash, and some blood chemical changes that may need to be treated (for instance, low potassium and magnesium levels).Side effects of bosutinib: Common side effects are usually mild and include diarrhea, nausea, vomiting, abdominal (belly) pain, rash, fever, fatigue, and low blood cell counts (including low platelet counts, low red blood cell counts, and low white blood cell counts).A monoclonal antibody and chemotherapy (chemo) are the usual treatments for chronic lymphocytic leukemia (CLL).Alemtuzumab is given by injection into a vein (intravenous or IV) several times a week, but subcutaneous injections are not approved by the FDA.Side effects during the infusion can be mild, such as itchy chills, fever, nausea, rashes, fatigue, and headaches.Drugs known as tyrosine kinase inhibitors (IKIs) that target BCR–ABL are the standard treatment for CML..Asciminib (Scemblix) These drugs seem to work best when CML is in the chronic phase, but some can also help patients with more advanced disease (accelerated or blast phases). All these medications have the potential to interact dangerously with over–the–counter vitamins, some other medications, and even some foods (such as pomegranates and grapefruit).Imatinib The first medication to precisely target the BCR–ABL tyrosine kinase protein was imatinib (Gleevec).Dasatinib Dasatinib (Sprycel) is another TKI that targets the BCR–ABL protein.Side effects of dasatinib: The possible side effects of dasatinib seem to be like those of imatinib, including fluid build–up, lowered blood cell counts, nausea, diarrhea, and skin rashes.Nilotinib Nilotinib (Tasigna) is another TKI that targets the BCR–ABL protein.Bosutinib: Bosutinib (Bosulif) is another TKI that targets the BCR–ABL protein.Ponatinib: Ponatinib (Iclusig) is a TKI targeting the BCR–ABL protein.Asciminib: Asciminib (Scemblix) is a TKI targeting a very specific area of the BCR–ABL protein.Rituximab is often used along with chemotherapy or targeted drugs, while Ofatumumab is used if CLL is no longer responding to other treatments.More serious side effects can occur during the infusion, including chest pain, heart racing, swelling of the face and tongue, cough, trouble breathing, dizziness, lightheadedness, or fainting.Tumour lysis syndrome is an uncommon side effect of any of these medications, particularly obinutuzumab, in individuals with extremely high white blood cell counts.Sometimes this resistance can be overcome by increasing the dose of imatinib, but some patients need to change to a different drug, such as one of the other TKIS.This heart rhythm problem can sometimes be caused by nilotinib interacting with other drugs or supplements, so it's especially important to be sure that your cancer doctor knows about any medicines you take, including over–the–counter medicines, vitamins, herbs, and supplements.It can also cause liver problems, including liver failure, as well as pancreatitis (inflammation of the pancreas, which can lead to severe belly pain, nausea, and vomiting).This gene makes a protein, BCR–ABL., which causes CML cells to grow and reproduce out of control.BCR–ABL is a type of protein known as a tyrosine kinase.Make sure your physician always has a current record of all the medications you use, including over–the–counter medications, vitamins, and herbal supplements.A serious side effect that can occur with this drug is fluid

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build-up around the lung (called a pleural effusion).The fluid can be drained off with a needle, but it can build up again, and the dose of dasatinib may need to be decreased.Side effects of ponatinib: Most side effects are mild and can include abdominal (belly) pain, headache, rash or other skin problems, and fatigue.There's also a risk of serious blood clots that can lead to heart attacks and strokes, or block arteries and veins in the arms and legs.The risk of serious blood clots is higher in older patients, those with certain risk factors, such as high blood pressure, high cholesterol, or diabetes; and those who have already had a heart attack, stroke, or poor circulation.This drug is used to treat patients with chronic phase CML if two or more other TKIs have already been tried or if their leukemia cells have a gene change called the T3151 mutation.Side effects of asciminib: The most common side effects of asciminib include feeling tired, nausea, diarrhea, joint and muscle pain, skin rash, and infection of the upper airways.It might also cause some changes to your bloodwork such as a low platelet count, increased triglycerides, low white and red blood cell counts, and abnormal kidney function.Rituximab, Obinutuzumab, and Ofatumumab are some of the main treatments for CLL.Possible side effects include local skin reactions, infections, low white blood cell counts, nausea, fatigue, and constipation.These drugs can cause hepatitis B infections that were dormant to become active again, leading to severe liver problems or even death.This can lead to renal failure and the accumulation of excessive levels of specific minerals in the blood.Alemtuzumab targets the CD52 antigen, which is found on the surface of CLL cells and many T lymphocytes.Skipping pills or adjusting doses can affect the way TKI treatment works.Additionally, you should always confirm the safety of any new medication with your doctor before using it. Furthermore, it's critical to remember that all TKIs have the potential to harm a fetus if used during pregnancy.TKIs are commonly started with chronic phase CML treatment.For chronic phase CML, any of these TKIs could be the first (or frontline) line of treatment.Side effects of imatinib Common side effects can include diarrhea, nausea, muscle pain, and fatigue.To see if your blood counts improve, your doctor might reduce your imatinib dosage.Imatinib (Gleevec) 2.Dasatinib (Sprycel) 3.cells.

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