Generic Name: Bortezomib
Trade name: Velcade

Drug type:
Velcade is a targeted therapy classified as a proteasome inhibitor.

What Conditions Are Treated by Velcade:
Velcade is FDA-approved for treatment of multiple myeloma and for mantle cell lymphoma in patients who have received at least one prior therapy. Velcade is frequently combined with the monoclonal antibody Rituxan or with Rituxan and dexamethasone for the treatment of WM.

How Velcade Is Given:
Velcade is given as an infusion into a vein (intravenous, IV) or as a subcutaneous (under the skin) injection into the thigh or abdomen.

The amount of Velcade that you will receive depends on many factors, including your height and weight, your general health or other health problems, and the type of cancer or condition being treated. Your doctor will determine your dose and schedule. Recent studies have indicated that administering Velcade subcutaneously in myeloma patients results in a lower incidence or reduced severity of peripheral neuropathy; these findings have not yet been confirmed in WM patients. Administering Velcade intravenously once a week, rather than twice a week, in WM patients results in a lower incidence or reduced severity of peripheral neuropathy and is as efficacious as the original twice weekly schedule.

Velcade Side Effects:
Most people do not experience all of the side effects listed. Side effects are often predictable in terms of their onset and duration. They are usually reversible and will go away after treatment is complete.

The following Velcade side effects are common (occurring in greater than 30% of patients): fatigue, generalized weakness, peripheral neuropathy (characterized by decreased sensation and numbness and tingling of the feet and hands), nausea, vomiting, diarrhea, poor appetite, constipation, low platelet count, fever, and low red blood cell count.

The peripheral neuropathy associated with Velcade appears to occur at a higher incidence in WM patients than in other cancer types. Dosage reductions may be indicated in patients receiving Velcade who develop neuropathy. While often reversible when treatment is over, some degree of peripheral neuropathy often persists.

The following are less common side effects (occurring in about 10-30% of patients): headache, difficulty sleeping, joint and muscle pains, swelling of the face, hands, feet, or legs, low white blood cell count, shortness of breath, dizziness, rash, dehydration, upper respiratory tract infections, cough, anxiety, muscle cramps, heartburn, abdominal pain, low blood pressure, itching, blurring of vision, and blood test abnormalities (low sodium, low magnesium, low calcium, low potassium).
When to Contact Your Doctor or Health Care Provider:
Contact your health care provider immediately, day or night, if you should experience any of the following symptoms: fever of 100.5°F (38°C) or higher or chills (both are possible signs of infection), shortness of breath, wheezing, difficulty breathing, closing up of the throat, swelling of facial features, and hives (possible allergic reaction).

The following symptoms also require medical attention. Contact your doctor or health care provider if you notice any of the following: nausea, vomiting, diarrhea, constipation unrelieved by mild laxative use, unusual bleeding or bruising, black or tarry stools or blood in your stools, blood in your urine, extreme fatigue, new or worsening symptoms of peripheral neuropathy, swelling, redness and/or pain in one leg or arm, swelling of the feet or ankles, sudden weight gain, unable to eat or drink for 24 hours, signs of dehydration, or dizziness.

Before starting Velcade treatment, make sure you tell your doctor about any other medications you are taking. While taking Velcade, do not take aspirin or products containing aspirin unless your doctor specifically permits this.

Self-Care Tips While Taking Velcade:
You may experience drowsiness or dizziness; avoid driving or engaging in tasks that require alertness until your response to the drug is known.

Drink at least two to three quarts of fluid every 24 hours, unless you are instructed otherwise.

You may be at risk of infection so report fever or any other signs of infection immediately to your health care provider.

Avoid contact sports or activities that could cause injury.

To reduce nausea, take anti-nausea medications as prescribed by your doctor, and eat small, frequent meals. In general, drinking alcoholic beverages should be kept to a minimum or avoided completely.

Get plenty of rest and maintain good nutrition.

Keep your bowels moving. Your health care provider may prescribe a stool softener to help prevent constipation that may be caused by this medicine.

Always inform your health care provider if you experience any unusual symptoms.

Monitoring and Testing While Taking Velcade:
You will be checked regularly by your health care professional while you are taking Velcade to monitor side effects and check your response to therapy. Periodic blood work to monitor your complete blood count (CBC) as well as the function of other organs (such as your kidneys and liver) and blood electrolytes will also be ordered by your doctor.
How Velcade Works:
Targeted therapy is the result of about 100 years of research dedicated to understanding the differences between cancer cells and normal cells. In the past, cancer treatment has focused primarily on killing rapidly dividing cells because that is an important feature of cancer cells. Unfortunately, some of our normal cells divide rapidly too, causing multiple side effects. Targeted therapy is about identifying other features of cancer cells that will damage or kill them without harming normal cells.

Each type of targeted therapy works differently but all interfere with the ability of the cancer cell to grow, divide, repair and/or communicate with other cells. Velcade targets and inhibits the proteasome enzyme complex within the cell. Proteasome is part of the cellular machinery and has many functions within the cell, such as helping to control the level of many of the proteins that help to regulate cell division and cell survival. Velcade also works by blocking the activation of adhesion molecules that cause cancer cells to "nest" in the bone marrow.

NOTE: The information in this fact sheet is intended to be helpful and educational, but it does not constitute an endorsement by the IWMF and is not meant to be a substitute for professional medical advice.

(Adapted from the Chemocare website, www.chemocare.com, sponsored by the Cleveland Clinic)