Myeloma is a cancer of the bone marrow. It forms in a type of white blood cell called a plasma cell. Plasma cells help the body to fight infections by making antibodies that recognise and attack germs. These cells crowd out normal bone marrow cells and may spread to other parts of the body, hence the term multiple myeloma.

Myeloma causes symptoms that need treatment for a period, followed by a period of remission where symptoms subside and do not need any treatment. This cycle of remission and recurrence (relapse) often occurs several times over. Your treatment may involve taking a combination of drugs, including some that have been introduced in recent years and have drastically improved myeloma treatment. Combinations of these have been found to be more effective than single drugs. Unfortunately there is not yet a permanent cure but you can expect to enjoy a good quality of life for many years.
Bortezomib is a cancer medicine approved in Europe in 2012 for the treatment of myeloma in the following situations:

- Patients untreated previously who cannot receive a high dose of chemotherapy before a transplant of blood stem-cells. In this case, bortezomib is used in combination with melphalan and prednisone.

- Patients untreated previously who are going to receive a high dose of chemotherapy followed by a transplant of blood stem-cells. In this case, bortezomib is used in combination with dexamethasone, or with dexamethasone plus thalidomide.

- Patients whose myeloma has been treated previously and whose disease is getting worse and who have already had, or cannot undergo, a transplant of blood stem-cells. In this case, bortezomib is used alone or in combination with dexamethasone or pegylated liposomal doxorubicin.

Bortezomib blocks a system within the cells called proteasome, through which proteins are broken down when they are no longer needed. In cancer cells, when some proteins are not broken down — e.g. because of the action of bortezomib — they can eventually die.

The most common side effects of bortezomib are:

- nausea
- diarrhoea
- constipation
- vomiting
- fatigue
- fever
- nerve damage in the hands and feet (neuropathy)
- headache
- sensations of pins and needles (paraesthesia)
- decreased appetite
- difficulty breathing (dyspnoea)
- rash
- herpes
And the following blood abnormalities are possible:

- low level of blood platelets (thrombocytopenia)
- low level of red blood cells (anaemia)
- low level of neutrophils (neutropenia) — a type of white blood cell.

In addition, Bortezomib must not be used by patients with one of these conditions: acute diffuse infiltrative pulmonary disease or pericardial disease.

HOW AND WHEN IS BORTEZOMIB GIVEN?

Bortezomib is an injectable drug. It can be injected into a vein or under the skin.

The dose is calculated per square metre of the body surface (depending on the patient’s weight and height). The medicine is injected into a vein through a catheter (a thin sterile tube). When it is injected under the skin, it is given in the lower abdomen or the thigh.

Bortezomib is given in treatment cycles of three to six weeks, depending on whether it is given alone or in combination with other myeloma medicines. In each cycle, there are at least 72 hours between one dose of bortezomib and the next one.

When severe side effects appear, the dose could be adjusted or the treatment could be suspended or delayed.
References


- Manufacturer’s product information - http://www.velcade.com/