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. Myeloma generally cannot be cured. However, treatment can reduce the signs and symptoms of the disease, or make them disappear for a period of time.
Panobinostat is a cancer medicine that was approved in Europe in 2015 for the treatment of relapsed myeloma in adult patients following a third relapse, provided that patients have had at least two previous cycles of treatment, including bortezomib and an immunomodulatory drug. The approval was based on results from the phase III PANORAMA 1 trial, in 768 patients with myeloma. Patients were randomly assigned to receive a combination of panobinostat, bortezomib and dexamethasone, or bortezomib and dexamethasone alone.

Panobinostat targets enzymes known as histone deacetylases or HDACs, which are involved in turning genes ‘on’ and ‘off’ within cells. This process may slow the over-development of plasma cells in myeloma patients or cause these cells to die. The decrease of plasma cells may result in remission of the disease or, at least, may slow its progression. It is the first HDAC inhibitor to be approved for treating myeloma.

When results were analysed just for the group of patients who had received at least two previous treatments, including bortezomib and an immunomodulatory medicine (thalidomide, lenalidomide or pomalidomide), the average time until the myeloma got worse (progression-free survival) was 12.5 months with panobinostat, versus 4.7 months with placebo.

The most common side effects of panobinostat are:

- diarrhoea
- tiredness
- nausea
- swelling in the arms or legs
- decreased appetite
- fever
- vomiting
- weakness

You may also develop the following blood abnormalities:

- low levels of phosphorus in the blood (hypophosphatemia)
- low potassium levels in the blood (hypokalemia)
- low levels of salt in the blood (hyponatremia)
- increased creatinine
- low platelets (thrombocytopenia)
- low white blood cell counts (leukopenia) or
- low red blood cell counts (anaemia)

There is a risk of bleeding in the gastrointestinal tract and the lungs, and liver damage.

**HOW AND WHEN IS PANOBINOSTAT GIVEN?**

Panobinostat is available as capsules in three different strengths. The recommended starting dose is 20mg. The capsules should be taken on scheduled days three times a week, two weeks on, one week off. You should swallow them whole with water, with or without food. You should continue panobinostat for eight cycles, after which it is recommended that patients showing clinical benefit continue the treatment for four additional cycles of six weeks each.

You should be closely monitored during treatment. If you have severe side effects, treatment may need to be stopped or the dose reduced. If you are over 65 you may require more frequent monitoring. If you vomit you should not take a replacement dose but should wait until the next scheduled dose. Contact your doctor immediately if you have any adverse reactions.
References


- Manufacturer’s product information

- http://www.farydak.com/

- San Miguel JF et al Panobinostat plus bortezomib and dexamethasone versus placebo plus bortezomib and dexamethasone in patients with relapsed or relapsed and refractory multiple myeloma: a multicentre, randomised, double-blind phase 3 trial, Lancet Oncol 2014; 15: 1195–206

- Rajkumar SV Panobinostat for the treatment of multiple myeloma. Lancet Oncol 2014; S1470-2045(14)70443-7