Myeloma, or multiple myeloma, is a blood cancer. As its symptoms include debilitating pain caused by bone damage, it is sometimes referred to as bone marrow cancer.

What is myeloma?
Myeloma affects the plasma cells in the blood, which are an important part of the immune system that fights infection.

When someone has myeloma, control of blood cell production breaks down. People with myeloma make lots of abnormal plasma, or myeloma, cells, which are not able to fight infection.

The myeloma cells cluster in the bone marrow, causing serious damage to the bone and also prevent other blood cells from being made.

People with myeloma often develop kidney problems. This is caused by large amounts of an abnormal antibody, called paraprotein, which is released into the blood by the myeloma cells.

Types of myeloma
Myeloma usually develops at multiple places throughout the skeleton, hence the name multiple myeloma. In cases where it only affects one site, it is called plasmacytoma.

Symptoms of myeloma
The most common symptom of myeloma is back pain, a result of myeloma cells causing damage to the bones in the spine.

Tiredness is also very common. This is due to a lack of red blood cells, which causes anaemia.

As both back pain and tiredness are common symptoms of other illnesses, myeloma can be difficult to spot. But generally, with myeloma, these symptoms are severe and persistent.

Bone damage causes excess calcium to be released into the blood, which can cause drowsiness, nausea and affect bladder function. A lack of normal plasma cells, which are vital to a healthy immune system, also increases the chances of contracting infections.

Who gets myeloma?
Around 3,750 people are diagnosed with myeloma in the UK every year.

Myeloma is a cancer of later life and is very rare in people under 40. Most people who have myeloma are 65 years or older.
Diagnosing myeloma

Myeloma is diagnosed using blood tests, in which samples are removed and examined in a laboratory.

The results of routine blood tests show changes in the amount of important cells in the blood.

To confirm a diagnosis of myeloma, further blood and sometimes urine tests are done to look for paraprotein, the abnormal antibody produced by myeloma cells, in the blood.

Most patients will also have an x-ray to identify areas of bone damage and confirm a diagnosis of myeloma. This is important, as there is another condition, called MGUS, which is related to myeloma that also causes paraprotein to be released into the blood.

Tests that detect genetic changes in cells are used to identify abnormalities that occur once the cancer has developed. These are called cytogenetic tests. These tests are really important in helping doctors to decide on the best treatment for every patient.

Treating myeloma

Chemotherapy, a combination of anti-cancer drugs, is the main form of treatment for myeloma. These drugs need to be taken in a precise sequence, called a protocol, to have the best effect.

The various anti-cancer drugs used to treat myeloma work in different ways. Some of them target the myeloma cells directly, while others act to relieve the symptoms and prevent further bone damage.

Nearly all patients with myeloma also take drugs called bisphosphonates from the onset of their treatment. These drugs significantly reduce bone damage and improve quality of life by relieving the serious symptoms of myeloma.

Stem cell transplant is an intensive form of treatment and only feasible for patients who are in good general health. Transplants are carried out using patient’s own stem cells, called an autologous transplant.

Further information

For further information visit the myeloma information pages of our website at [www.llresearch.org.uk](http://www.llresearch.org.uk)

Here you will find more information about the latest available treatments and clinical trials for patients with myeloma.

If you would like copies of our more detailed information about myeloma, or any of our treatment related titles, you can order online at [www.llresearch.org.uk](http://www.llresearch.org.uk) or by contacting our patient information team at patientinfo@llresearch.org.uk or on 020 7405 0101.

Leukaemia & Lymphoma Research is the only UK charity dedicated to research into better treatments and cures for all blood cancers, including leukaemia, lymphoma and myeloma.