

Factsheet:

Myeloma

What is myeloma?

Myeloma, also known as multiple myeloma, is a cancer of the bone marrow that affects the plasma cells, a type of white blood cell.

Normally, new plasma cells are produced to replace old, worn-out cells in an orderly and controlled way. They produce antibodies, also called immunoglobulins, to help fight infection.

However, in myeloma, the process gets out of control and abnormal amounts of plasma cells are produced releasing only one type of abnormal antibody – known as paraprotein – which has no useful function and can't fight infection effectively.

There are several types of myeloma which are classified depending on the type of immunoglobulin (Ig) produced by the myeloma cells. The type of myeloma you have doesn't usually affect the treatment you're offered but it can influence how the disease will affect you.

What causes myeloma?

No single cause for myeloma has been identified, but a number of things are known to increase the risk of developing it. These include:

- age – The risk of myeloma increases with age and it's most commonly diagnosed after the age of 65.
- race – myeloma is twice as common in African-Caribbean people than in white people.
- radiation – people who have been exposed to high levels of radiation have a higher risk of developing myeloma.

Signs and symptoms of myeloma

The most common symptom of myeloma is bone pain, especially in the spine but other bones may be affected such as the ribs, skull or pelvis. However, many people do not have any symptoms in the early stages of the disease.

Other symptoms may include:

- tiredness and lethargy
- frequent infections
- weight loss
- loss of appetite, feeling sick, constipation
- unexplained bruising and abnormal bleeding
- kidney problems, caused by paraproteins

If you have any of these symptoms, it's important to see your doctor as soon as you can. But remember, many people with these symptoms do not have myeloma.

Diagnosis of myeloma

If you have any of the symptoms mentioned, you should visit your GP who will examine you and arrange for you to have a blood test, or any x-rays that may be needed. They will refer you to a hospital to see a haematologist (a doctor who specialises in blood conditions) who will ask you about your general health and examine you with further tests including blood tests, urine tests, x-rays and bone marrow tests.

Tests for myeloma

Blood tests

Blood tests are an important way to diagnose and monitor your myeloma. Tests on your blood will include:

- serum protein electrophoresis – the main blood test to diagnose myeloma. It measures the amount of abnormal paraproteins in the blood.
- full blood count – measures the levels of white cells, red cells and platelets in the blood.
- urea and electrolytes – this will show how well your kidneys are working.
- calcium level – measure the level of calcium in the blood which is sometimes raised in myeloma patients.
- beta-2 microglobulin level - measures the level of a protein produced by myeloma cells - it can help to tell how active a myeloma is.
- albumin level - measures the level of albumin, a protein found in the blood - a low level of albumin can indicate an advanced myeloma.

Bone marrow test

If paraproteins are found in your blood your doctor will want to take a bone marrow biopsy.

The bone marrow sample is taken under local anesthetic and taken from the pelvis or (rarely) breastbone. The sample will be analysed for myeloma cells.

Cytogenetics

Cytogenetic tests on the bone marrow samples will look for changes in the chromosome within the myeloma cells and can help to decide on the best treatment and predict how well the myeloma may respond to that treatment.

X-rays

X-rays may be carried out to review any damage to the bones from the myeloma cells.

Side effects of treatment

Everyone reacts differently to cancer treatments and not all drugs cause the same side effects. Your doctor will be able to give you more information on the side effects of your particular treatment. Some side effects you may experience include:

- bruising or bleeding due to the reduction of platelets
- feeling or being sick
- sore mouth
- anaemia due to reduction in red blood cells
- hair loss
- fatigue
- infection due to reactions in white blood cells

Treatment of myeloma

There are two main goals for treatment for myeloma; to bring the myeloma under control by removing the cancerous cells from your spine and treating the symptoms as a result of the myeloma such as anaemia and bone pain.

Not everyone diagnosed with myeloma will need treatment straight away if their myeloma is not causing any symptoms or complications. Patients will be regularly monitored for signs that the cancer is beginning to cause problems. This is called Watch and Wait.

Treatment options

Treatment combinations are usually made up of two or three different types of drugs which work well together and can include chemotherapy drugs, steroids and other types of anti-myeloma drugs. Commonly used initial treatment combinations for myeloma include:

- Bortezomib, thalidomide and dexamethasone (known as VTD)
- Cyclophosphamide, thalidomide and dexamethasone (known as CTD)
- Melphalan, prednisolone and thalidomide (known as MPT)
- Bortezomib, melphalan and prednisolone (known as VMP)

After receiving an initial course of treatment, you may be suitable to go on and have a stem cell transplant.

You may also be prescribed other treatment to help prevent or manage potential side-effects of treatment such as bone pain (pain killers) and anaemia (blood transfusions). It is also routine practice for newly diagnosed patients to be started on intravenous (into the vein) zoledronic acid (Zometa). This is a bisphosphonate which aids in bone repair and strengthening.

Questions to ask your medical team about myeloma

We understand going through a blood cancer journey can be difficult. It may help to talk to a close friend or relative about how you are feeling. Here are a list of questions that may be useful to ask your medical team.

- How would I know if I had myeloma?
- What tests will I need to have?
- What will the tests show?
- How long will the results take?
- How rare is myeloma?
- What sort of treatment will I need?
- How long will my treatment last?
- What will the side effects be?
- Is there anything I should or shouldn't eat?
- Where can I get help with claiming benefits and grants?
- Where can I get help dealing with my feelings?

Support

We provide emotional support, information and advice to newly diagnosed patients, their carers, friends and families. Whether they need a listening ear from our 24/7 CARE Line team, a buddy to chat to who has been through a similar experience, a visit to one of our support groups, or good quality, trusted information, we are here for them all.

Call the 24-hour CARE Line, free, on 08088 010 444 or email care@leukaemiare.org for information.