

What is myeloma?

Myeloma occurs when abnormal plasma cells of the bone marrow grow in an uncontrolled way.^{1,2}

Plasma cells develop in the bone marrow from B lymphocytes, a type of white blood cell. Plasma cells make antibodies that help the body fight infection.¹

Myeloma occurs when plasma cells grow abnormally and become myeloma cells. Myeloma cells build up in the bone marrow and form tumours in one or many bones of the body. Myeloma cells also crowd the bone marrow, preventing it from making healthy blood cells.^{1,2}

What are the different types of myeloma?

When myeloma cells are found in many bones of the body, this is called multiple myeloma. Multiple myeloma is the most common form of myeloma.^{1,2}

When myeloma cells are only found in only one part of the body, this is called a plasmacytoma.^{1,2} Plasmacytomas may form in bone or in soft tissues such as the throat or tonsils.^{1,2}

What are the symptoms of myeloma?

The most common symptoms of myeloma are:

- ▶ bone pain, usually felt in the back or ribs^{1,2}
- ▶ bones that break easily^{1,2}
- ▶ unexplained fever and frequent infections^{1,2}
- ▶ tiredness (caused by anaemia)¹
- ▶ easy bruising or bleeding.^{1,2}

There are a number of conditions that may cause these symptoms, not just myeloma. If any of these symptoms are experienced, it is important that they are discussed with a doctor.

What are the risk factors for myeloma?

A risk factor is any factor that is associated with an increased chance of developing a particular health condition, such as myeloma. There are different types of risk factors, some of which can be modified and some which cannot.

It should be noted that having one or more risk factors does not mean a person will develop myeloma. Many people have at least one risk factor but will never develop myeloma, while others with myeloma may have had no known risk factors. Even if a person with myeloma has a risk factor, it is usually hard to know how much that risk factor contributed to the development of their disease.

While the causes of myeloma are not fully understood, there are a number of factors associated with the risk of developing the disease. These factors include:

- ▶ increasing age
- ▶ a family history of multiple myeloma
- ▶ exposure to high dose radiation, and certain chemicals.

How is myeloma diagnosed?

A number of tests will be performed to investigate symptoms of myeloma and confirm a diagnosis. Some of the more common tests include:

- ▶ a physical examination²
- ▶ examination of a blood sample
- ▶ examination of a urine sample^{1,2}
- ▶ imaging, which may include X-ray, computed tomography (CT) scan or magnetic resonance imaging (MRI)
- ▶ taking a sample of bone marrow for examination under a microscope – this is called bone marrow aspiration
- ▶ sometimes a sample of bone marrow is taken with a small piece of bone for examination under a microscope – this is called a bone marrow biopsy.^{1,2}

Treatment options

Treatment and care of people with cancer is usually provided by a team of health professionals – called a multidisciplinary team.

Treatment for myeloma depends on the stage of the disease, the severity of symptoms and the person's general health. Treatment usually involves chemotherapy, or targeted therapies to destroy cancer cells.^{1,3} Some patients may be offered a stem cell transplant.³

Research is ongoing to find new ways to diagnose and treat different types of cancer. Some people may be offered the option of participation in a clinical trial to test new ways of treating myeloma.

Finding support

People often feel overwhelmed, scared, anxious and upset after a diagnosis of cancer. These are all normal feelings.

Having practical and emotional support during and after diagnosis and treatment for cancer is very important. Support may be available from family and friends, health professionals or special support services.

In addition, State and Territory Cancer Councils provide general information about cancer as well as information on local resources and relevant support groups. The Cancer Council Helpline can be accessed from anywhere in Australia by calling **13 11 20** for the cost of a local call.

More information about finding support can be found on the Cancer Australia website www.canceraustralia.gov.au

References

1. National Cancer Institute. Plasma Cell Neoplasms (Including Multiple Myeloma) Treatment (PDQ) – patient version. Available from <http://www.cancer.gov/cancertopics/pdq/treatment/myeloma/Patient> [Accessed July 2012].
2. Leukaemia Foundation of Australia. Understanding Myeloma – A guide for patients and families. Available from http://www.leukaemia.org.au/web/resources/pdf/booklet_myeloma.pdf [Accessed July 2012].
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