

What is Multiple Myeloma?

Multiple myeloma is a disease that arises from the abnormal and uncontrolled growth of plasma cells in the bone marrow.ⁱ
It is the third most common form of blood cancer.ⁱⁱ

Healthy plasma cells, a type of white blood cell, come from the bone marrow and play a vital role in the immune system by producing antibodies that help the body attack and kill germs. However, with multiple myeloma, the plasma cells become cancerous and accumulate in the bone marrow, crowding out healthy blood cells. The cancerous cells then produce an abnormal antibody called M protein, which can cause damage to the body.ⁱⁱⁱ

After initial treatment, the disease often changes and comes back (called relapse) or does not respond to medication (called refractory). Therefore, continued research into new therapies is needed.^{iv}

Signs & symptoms

Although some affected with multiple myeloma will not exhibit any signs of the disease (asymptomatic), common symptoms include:^{i, iii}

- 1 Breakdown of the bone resulting in high levels of calcium in the blood (hypercalcaemia), which causes dehydration, excessive thirst, nausea, constipation, and confusion
- 2 Poor kidney function
- 3 Weakened bones making patients more susceptible to fracture
- 4 Anaemia that may result in weakness, dizziness and shortness of breath
- 5 Fatigue
- 6 Weakened immune system causing more infections such as pneumonia

Patients & prevalence

<p>3rd most common blood cancer</p> <p>Multiple myeloma is the third most common form of blood cancer worldwideⁱⁱ</p>	<p>Men Slightly more common in men</p> <p>Multiple myeloma is slightly more common in men^v</p>	<p>66-70 years old</p> <p>The risk of developing multiple myeloma increases as one ages. The average age range at diagnosis is 66-70 years^{vi}</p>	<p>~58% survival rate</p> <p>The 5-year survival rate for multiple myeloma patients is about 58% in the US^{vii}</p>	<p>>126% globally</p> <p>Incident cases from 1990 to 2016 increased by 126% globallyⁱⁱⁱ</p>	<p>176,404 new cases worldwide in 2020</p> <p>176,404 new cases of multiple myeloma were diagnosed worldwide in 2020^{ix}</p>
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Diagnosis

Several exams and tests may be used to help diagnose multiple myeloma.ⁱⁱⁱ

- Specialised blood tests
- Bone marrow examination
- X-rays and other imaging tests

Treatment

Over the course of their disease, patients may be treated with one or more of these therapies:ⁱ

- Targeted therapy
- Biological therapy
- Stem cell transplant
- Corticosteroid medication
- Chemotherapy
- Radiation therapy
- Surgery

Continued research into new therapies is needed as multiple myeloma commonly becomes refractory to available treatments.^{iv}

References

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