What is Multiple Myeloma?

Multiple myeloma is a disease that arises from the abnormal and uncontrolled growth of plasma cells in the bone marrow.¹ It is the second most common form of blood cancer.¹ 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.²

After initial or several lines of treatment, the disease often changes and comes back (called relapse) or does not respond to medication (called refractory). As a result, there is a need for newer, effective treatments for relapsed/refractory multiple myeloma.iv

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

**Signs & Symptoms**

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

**Patients & Prevalence**

- Multiple myeloma is more common in men
- The 5-year survival rate for multiple myeloma patients is about 53% in the US
- 32,270 new cases of multiple myeloma are estimated to be diagnosed in the US in 2020
- Incident cases from 1999 to 2016 increased by 16% in the US
- The risk of developing multiple myeloma increases as one ages. The average age range of diagnosis is 65-70 years old
- The 2nd most common blood cancer in the US

**Diagnosis**

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

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

**Treatment**

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

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

Despite recent treatment advances, there remains a need for new approaches for multiple myeloma patients who have relapsed or become resistant to available therapies or have poor responses in later lines of treatment.

---

References

⁴ Nooka AK, Kastritis E, Dimopoulos MA. Treatment options for relapsed and refractory multiple myeloma. Blood. 2015;126(20).