

## Multiple Myeloma

Multiple myeloma is a cancer that begins in the plasma cells of the body. A plasma cell is found in bone marrow, generates antibodies, and helps fight infections. Researchers do not know the cause of multiple myeloma and are still learning how plasma cells become cancerous. When myeloma develops, the cells can create tumors called plasmacytomas. A single plasma cell tumor is called solitary or isolated plasmacytoma. When plasma cells are widespread in the bone marrow, the disease is called multiple myeloma.

### Statistics

- In the United States, one in 132 people will be diagnosed with multiple myeloma.
- In 2019, there will be approximately 32,110 new cases of multiple myeloma diagnosed.
- Approximately 12,960 deaths are expected from the disease in 2019.
- In Texas, approximately 2,183 people are expected to be diagnosed with multiple myeloma, and an estimated 924 people deaths are expected from the disease in 2019.

### Risk Factors

Doctors do not know how to prevent multiple myeloma. However, there are several factors that may increase risk:

- **Age:** Multiple myeloma is more likely to be diagnosed in people over age 65.
- **Gender:** More men than women are diagnosed with the disease. This year, more than 4,000 more men than women will be diagnosed with multiple myeloma.
- **Race:** African-Americans are more than two times as likely to be diagnosed with the disease than Caucasians.
- **Family history:** People with immediate family members who have had multiple myeloma are more likely to develop the disease.
- **Other conditions:** Having solitary plasmacytoma or monoclonal gammopathy of undetermined significance (MGUS), a condition in which plasma cells make many copies of the same antibody, increases risk of developing myeloma. Those diagnosed with other plasma cell diseases may later develop multiple myeloma. Obesity and exposure to radiation also raise risk.

### Symptoms

Patients in the early stages of multiple myeloma do not always show symptoms or symptoms may resemble those of other diseases. However, there are several symptoms which include:

- Bone pain, often located in the ribs, hips, skull, or back
- Weak or easily broken bones
- Persistent thirst or dehydration
- Unexplained weight loss or loss of appetite
- Abdominal pain
- Shortage of red blood cells (anemia), white blood cells
- (leukopenia), or platelets (thrombocytopenia)
- Weakness on one side of body, slurred speech
- Weakness, drowsiness, confusion, restlessness, or fatigue
- Nausea or vomiting
- Frequent urination
- Impaired kidney function or kidney failure
- Frequent infections
- Constipation
- Numbness, muscle weakness, or tingling in extremities
- Easily bruising or bleeding
- Unexplained fever
- Breathing trouble

### Treatment

Treatment options for multiple myeloma vary depending upon the type of myeloma, severity, and stage of the disease, as well as the health, age, and lifestyle and quality of life goals of the patient. Anyone with multiple myeloma should consult a medical oncologist or hematologist about treatment. Options can include surgery, chemotherapy, targeted therapies, biologic therapy, other drug therapy, radiation therapy, bisphosphonate therapy to reduce fracture risk, plasmapheresis, stem cell transplants, and watchful waiting.

Sources: American Cancer Society, American Society of Clinical Oncology, Multiple Myeloma Research Foundation, National Cancer Institute, and Texas Cancer Registry



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