What Is Myeloma?

Myeloma, also called multiple myeloma, is cancer of plasma cells. Normal plasma cells are an important part of the immune system. They produce antibodies that help the body fight infections. Myeloma cells, however, produce abnormally high levels of antibodies that do not help protect you from infections. The very high levels of antibodies can damage the body.

Myeloma begins in the bone marrow—the soft, spongy tissue filling the center of bones—where red blood cells, white blood cells, and platelets are made. Although most myeloma cases cannot be cured, myeloma is very treatable and most patients will have fulfilling lives and a good quality of life for many years after diagnosis.

Is There a Difference Between Myeloma and Multiple Myeloma?

No, both terms are used for the same disease. Because myeloma cells often develop in more than one location, it is also called multiple myeloma.

How Common Is Myeloma?

Each year, approximately 20,000 new cases are diagnosed in the United States. This represents about 10% of all blood cancers, but only 1% of all cancers.

Is Myeloma Hereditary?

Research suggests that your risk of developing myeloma is higher if a family member has had the disease.

What Causes Myeloma?

There is no known cause of myeloma, but we know it begins with an abnormal plasma cell that grows out of control and eventually crowds out healthy cells in the bone marrow.

What Are the Risk Factors for Myeloma?

These are risk factors for developing myeloma:

- **Age.** Most cases of myeloma are diagnosed in people over the age of 65.
- **Sex.** Men are 50% more likely to develop myeloma than women.
- **Race.** Myeloma is twice as common in black Americans as in white Americans, and the risk of developing myeloma is lowest among Asians.
- **Body weight.** Being overweight raises your risk of developing myeloma.
- **Plasma cell disorders.** Some plasma disorders such as MGUS (monoclonal gammopathy of unknown significance) or plasmacytoma (a type of cancer that can turn into myeloma) lead to a higher risk of developing myeloma.
- **Exposure to certain hazardous materials.** Studies have shown that exposure to agent orange, petroleum products, and radiation raises your risk of developing myeloma.

How Does Myeloma Affect the Body?

Myeloma patients develop a high number of abnormal plasma cells in the bone marrow. These myeloma cells grow uncontrollably and eventually crowd out healthy cells. The rapid growth of the myeloma cells, along with the production of very high levels of antibodies, leads to a number of health problems:

- **Bone damage.** Plasma cells and destructive cells called osteoclasts may build up in the skeleton. Bones become weak and prone to breaking. This can also cause pain in the lower back, pelvis, ribs, and skull, and spinal cord compression, which causes nerve pain.
- **Kidney damage.** High amounts of myeloma proteins in the body can cause kidney problems or even failure. To help avoid this, drink plenty of
fluids and avoid nonsteroidal anti-inflammatory drugs (aspirin and ibuprofen) and contrast agents used in some medical imaging tests.

- **Pain and muscle weakness.** Weak bones can press on nerves, causing pain, numbness, tingling, and muscle weakness.
- **Anemia.** Myeloma inhibits growth of red blood cells, the cells that carry oxygen through the body. This can lead to anemia and feeling tired, weak, dizzy, and short of breath.
- **Infections.** Myeloma lowers the number of white blood cells (WBC) and antibodies that fight infection in the body. This causes a higher risk of pneumonia, sinus infections, urinary tract infections, and shingles. Chemotherapy can lower WBC levels even more. Your doctor may prescribe antibiotics to manage infections.
- **High calcium levels.** Bone damage can cause calcium to build up in the blood. This is called hypercalcemia. It can cause damage to the kidneys, fatigue, muscle weakness, loss of appetite, nausea, and confusion.
- **Thick blood.** Abnormal proteins produced by myeloma cells can cause the blood to thicken. When this happens and blood doesn't flow properly, it may cause shortness of breath, bruising, nosebleeds, internal bleeding, hazy vision, confusion, numbness, and chest pain.

**If I Feel Very Tired and Weak, Can I Still Start Treatment?**

Starting treatment will help reduce the symptoms of myeloma and help you feel better. The key is getting treatment as early as possible. If treatment is delayed, you could be at risk for serious medical conditions such as kidney failure or brittle bones.

To make an appointment or for more information, call the new patient coordinator at 801-587-4652 or 1-800-664-8268 toll free.