

Multiple Myeloma

Multiple myeloma is the most common type of bone cancer. It accounts for 1 percent of all types of cancers. Roughly, 20,000 people are affected with this condition every year in the United States. They are responsible for 10,000 deaths in Americans every year. The disease generally occurs in older individuals. Less than 3 percent of all cases appear in those younger than 40 years of age. Multiple myelomas are more common in men than what they are in women. They are twice as common in African Americans as what they are in Caucasians.

Multiple Myeloma Anatomy

Multiple myeloma is a name given for a clock face appearance of these forms of cancer cells when they are seen underneath of a microscope. They make their way into just about every part of an individual's bone marrow. If you take an x-ray image of the myeloma, it appears as if holes were punched from the bone.

These cells come from plasma cells that have changed. Plasma cells are essentially white blood cells that have secreted antibodies as part of their immune response. These changed cells produce an abnormal amount of protein antibodies. No one is quite sure what the exact location or causes is in the cellular change.

Multiple myeloma isn't confined to a specific location or bone. It often involves the entire skeleton. If there is only one lesion found, it is referred to as a plasmacytoma. Most doctors think that this single lesion is just an early stage of multiple myeloma.

How to Treat Multiple Myelomas:

1. Chemotherapy

The standard type of treatment medications are prednisone and melphalan. Using this treatment alone will extend life expectancy by three years. If this type of therapy isn't effective, alternatives are available. VAD and VBMCP are two alternatives to the standard treatment methods. These particular treatments can cause severe weakness in the muscles, and they can also increase the chance of infection occurring.

Thalidomide and interferon might also be used. Recent treatment advancements for multiple myeloma have increased survival rates and response rates. The plan includes a high-dose of chemotherapy, followed with autologous stem cell transplantation. Using this treatment, patients have a 20 percent chance of being able to live beyond a decade.

2. Radiation Therapy

This type of therapy is reserved for strictly decreasing the size of the bone lesions.

3. Supportive Care

Supportive care is crucial. It entails pain control, comfort measures and interventions for maintaining function. It includes managing anemia, infections, bone disease, kidney failure and pain attributed to the condition itself.

Tips:

- Bisphosphonates are used for preventing destructive bone lesions and spinal fractures.
- Occasional blood transfusions or erythropoietin can be used to manage anemia.
- Vaccinations and antibody infusions are useful in helping patients that struggle with recurring infections.
- Hydration and corticosteroids can be used for treating high blood calcium concentrations, which stems from bone loss, and dehydration.
- Narcotics are often used to help address the pain associated with the bone lesions.