



Myeloma

is on

the Move

By

Kaytea Petro

Multiple myeloma (also known as myeloma or plasma cell myeloma) is a progressive hematologic (blood) disease. It is a cancer of the plasma cell, an important part of the immune system that produces immunoglobulins (antibodies) to help fight infection and disease. Multiple myeloma is characterized by excessive numbers of abnormal plasma cells in the bone marrow and overproduction of intact monoclonal immunoglobulin (IgG, IgA, IgD, or IgE) or Bence-Jones protein (free monoclonal k and λ light chains). Hypercalcemia, anemia, renal damage, increased susceptibility to bacterial infection, and impaired production of normal immunoglobulin are common clinical manifestations of multiple myeloma. It is often also characterized by diffuse osteoporosis, usually in the pelvis, spine, ribs, and skull.

Multiple myeloma is the second most prevalent blood cancer after non-Hodgkin's lymphoma. It represents approximately 1% of all cancers in white US residents and 2% of cancers in black residents.

Recent statistics indicate both increasing incidence and earlier age of onset. The average age at diagnosis is 62 years for men and 61 years for women, and only 4% of cases are diagnosed in individuals under the age of 45. Approximately 56,200 Americans had myeloma in 2005 (the most current date these statistics are available) and the American Cancer Society estimates that approximately 19,920 new cases of myeloma will be diagnosed during 2008.

Multiple myeloma occurs more frequently in men than women (of the estimated 19,920 new cases referenced above, 11,190 are expected to occur in men versus 8,730 in women). African Americans have the highest reported incidence of this disease and Asians the lowest. Among African Americans, myeloma is one of the leading causes of cancer death.

Although a tremendous amount of work has gone into the search for the cause of multiple myeloma, to date no cause for this disease has been identified. However, the search for a cause has suggested possible associations between myeloma and a decline in the immune system, genetic factors, certain occupations, certain viruses, exposure to certain chemicals including Agent Orange, and exposure to radiation.

Age is the most significant risk factor for multiple myeloma, as 96% of cases are diagnosed in people over the age of 45, and more than 75% occur in people over the age of 70. Because the peak age for multiple myeloma is among the elderly it is thought that susceptibility may increase with the aging process and the consequent reduction in immune surveillance of evolving cancer, or that myeloma may result from a lifelong accumulation of toxic insults or antigenic challenges.

People in agricultural occupations, petroleum workers, workers in leather industries, and cosmetologists all seem to have a higher-than-average chance of developing multiple myeloma. Exposure to herbicides, insecticides, petroleum products, heavy metals, plastics, and various dusts including asbestos also appear to be risk factors for the disease. In addition, individuals exposed to large amounts of radiation, such as survivors of the atomic bomb explosions in Japan, have an increased risk for myeloma, although this accounts for a very small number of cases.

It is important to remember that in most cases, individuals who develop multiple myeloma have no clear risk factors. Myeloma may be the result of several factors acting together.

*From the Multiple Myeloma Research Foundation website
www.multiplemyeloma.org*

This book was started in 2004 and completed in 2008. It became a collaboration between my father and me; he directed some of the stories. I dedicate this book to his memory, and to my family and families like ours who are forced to prove themselves resilient to something both random and incomprehensibly cruel.

About the creator:

Kaytea Petro was born and raised in San Francisco, California, and received art training at the Florence Academy of Art, Sichuan Fine Arts Institute and obtained her degree from University of California Santa Cruz. She primarily works on comics, but also makes costumes, furniture, performance art, jewelry, automata and altered bikes. More work can be seen at:

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