

Multiple myeloma is a rare form of cancer characterized by excessive production (proliferation) and improper function of certain cells (plasma cells) found in the bone marrow. Plasma cells, which are a type of white blood cell, are produced in the bone marrow and normally reside there. Excessive plasma cells may eventually mass together to form a tumor or tumors in various sites of the body, especially the bone marrow. If only a single tumor is present, the term solitary plasmacytoma is used. When multiple tumors are present or the bone marrow has greater than 10% plasma cells, the term multiple myeloma is used. Plasma cells are a key component of the immune system and secrete a substance known as immunoglobulin proteins (M-proteins), a type of antibody. Antibodies are special proteins that the body produces to combat invading microorganisms, toxins, or other foreign substances. Overproduction of plasma cells in affected individuals results in abnormally high levels of these proteins within the body, referred to as M proteins. Major symptoms of multiple myeloma may include bone pain, especially in the back and the ribs; low levels of circulating red blood cells (anemia) resulting in weakness, fatigue, and lack of color (pallor); and kidney (renal) abnormalities. Some affected individuals are more susceptible to bacterial infections such as pneumonia. The cause of multiple myeloma is unknown.