Hyperviscosity syndrome can develop in patients with plasma cell dyscrasias, particularly Waldenstrom macroglobulinemia (WM). Occurring in 10%–30% of patients with hyperviscosity syndrome, WM is an uncommon B-cell proliferative disorder characterized by bone marrow infiltration and production of monoclonal immunoglobulin M. The elevated blood viscosity in WM is the result of increased circulating serum immunoglobulin M. Because hyperviscosity syndrome can be lethal, it must be recognized and managed early. Hyperviscosity syndrome has a triad presentation: vision changes, neurologic abnormalities, and bleeding. Treatment includes hydration with diuresis, plasmapheresis, and control of the underlying disease. The current treatment for WM is chemotherapy (i.e., alkylating agents and nucleoside analogs) and the monoclonal antibody rituximab. Although hyperviscosity syndrome is not one of the most common conditions, when it does occur, oncology nurses play a critical role in patients’ assessment and care.