

# HOSPITAL PHYSICIAN®

## HEMATOLOGY BOARD REVIEW MANUAL

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## Multiple Myeloma and Waldenstrom's Macroglobulinemia

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#### INTRODUCTION

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Multiple myeloma, which accounts for approximately 10% of hematologic malignancies, is a disease of plasma cells involving bone and bone marrow. It is characterized by the increased production of monoclonal immunoglobulin. The disease can produce skeletal problems (including pathologic fractures), bone marrow failure (often limited to anemia), renal failure, and an increased risk of infection. The median age at diagnosis is in the seventh decade. With the exception of younger patients treated with allogeneic transplantation, therapy is palliative rather than curative. Median survival is approximately 3 years when patients are treated with chemotherapy. Autologous stem cell transplantation apparently increases median survival by 18 to 24 months, but there is no evidence that autologous transplantation can produce cures.

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#### CASE REPORT: INITIAL PRESENTATION

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A 58-year-old man seeks medical attention because of low back pain and pain in the left hip. Past medical history is positive only for hypertension, for which he takes an angiotensin-converting enzyme inhibitor. Physical examination is unrevealing. Radiographs reveal osteopenia of the lumbar spine and a possible lytic lesion of the left pubic ramus. A number of blood tests are obtained. The hematocrit is 36%. The leukocyte count is  $8.4 \times 10^3/\text{mm}^3$  with a normal differential. The platelet count is  $185 \times 10^3/\text{mm}^3$ . The erythrocyte morphology on the peripheral smear is normal. The serum sodium, potassium, chloride, and bicarbonate levels are within normal limits. The blood urea nitrogen level is 42 mg/dL, and the serum creatinine level is 2.9 mg/dL.

Because of the patient's anemia, skeletal findings, and renal dysfunction, myeloma is suspected. A bone