

Preface

Multiple myeloma is the second most common hematologic malignancy and currently affects approximately 50,000 people in the United States. Each year about 20,000 people are diagnosed with myeloma. Although new treatments have been developed, which significantly prolong the survival of patients, myeloma bone disease still remains a major cause of severe morbidity and increased mortality in patients with myeloma. Myeloma bone disease is characterized by “punched out” lytic lesions caused by increased osteoclastic bone destruction accompanied by suppressed or even absent osteoblast activity. Advances in our understanding of both the pathophysiology of myeloma bone disease and the development of novel agents that target specific pathways involved in both the increased osteoclast formation and the suppressed osteoblast activity in myeloma provide new hope for these patients. The treatment of myeloma bone disease was revolutionized by clinical trials that demonstrated the significant benefit of intravenous bisphosphonate therapy in patients with myeloma bone disease. With the identification of many of the cytokines and chemokines involved in myeloma bone disease, novel therapies such as denosumab that blocks RANKL activity, anti-DKK1, which targets the inhibition of osteoblast activity by blocking Wnt signaling inhibition, and the potential anabolic effects of agents such as bortezomib and activin have greatly improved our potential to block the progression or reverse myeloma bone disease. These topics as well as new techniques for imaging myeloma bone disease, the use of new bone markers for monitoring myeloma bone disease, and surgical techniques to ameliorate pain and loss of vertebral height in patients with vertebral compression fractures are highlighted in this volume. With the survival of patients with myeloma increasing, treatments that are directed at preventing the progression of bone disease, fractures, and even repairing lytic lesions will have even a more profound impact on patients with myeloma. In this book, outstanding experts from a variety of backgrounds discuss the presentation of patients with myeloma bone disease, the underlying pathophysiology of both the increased osteoclast activity and the suppressed osteoblast activity that occurs in myeloma, murine models of myeloma bone disease, as well as therapeutic and diagnostic procedures for patients with myeloma bone disease.

Pittsburgh, PA

G. David Roodman

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Roodman, G.D. (Ed.)

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