

# Preface

Multiple myeloma has evolved from an incurable disease with no therapeutic options five decades ago to a readily treatable disease, based upon increased understanding of its biology and pathogenesis. Nonetheless, myeloma remains a complex disease driven by both genomic and epigenetic alterations. Moreover, interaction of tumor cells with the bone marrow microenvironment confers additional tumor cell growth, and survival advantage, and drug resistance. Advances in our understanding of the pathobiology of the disease have also translated to improved diagnostic and prognostic methods including high-throughput genomics, serum-free light chain, MRI, and PET scanning. Notably, proteasome inhibitors, immunomodulatory agents, as well as other targeted agents, when used singly or in combination, have transformed myeloma therapy and now achieve unprecedented frequency and extent of response. These rapid advances highlight the need for a state-of-the-art resource focused on the biology of myeloma and its clinical application. Our book describes the basic advances in our understanding of the disease biology and delineates molecular mechanisms mediating tumor growth and progression, as well as bone disease and organ dysfunction. Importantly, it provides the preclinical rationale for and clinical efficacy of single and combination targeted therapies directed at the tumor cell in its bone marrow milieu. With an eye toward the future, we update the recent advances using high-density, high-throughput genomic technologies to integrate both DNA and transcriptional changes for improved molecular classification and personalized therapeutic options. Finally, since studies are already reporting prolonged disease-free survival in myeloma, our book highlights the fact that we are now at the threshold of curative outcome in this disease.

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