FOREWORD

Leukemia is a hematological malignancy caused by clonal proliferation of abnormal lymphoid or hematopoietic cells in the bone marrow and/or lymphoid system. There are many different types of leukemias. Acute leukemia progresses fast, and patients' condition deteriorates quickly without treatment; while chronic leukemia progresses slowly, and the patients may stay with the disease for a long time even without treatment. Acute leukemia is predominantly the malignancy of lymphoid or hematopoietic precursors (blasts). Based on cell origin, acute leukemia can be classified as acute lymphoblastic leukemia, acute myeloid leukemia, or acute leukemia of ambiguous lineage. Chronic leukemia represents the malignancy of mature or maturing lymphoid or hematopoietic cells, and predominantly affects adults. Leukemias can be further classified into many subtypes with the incorporation of more clinical, phenotypic, and genetic information. The frontline treatment for leukemia is chemotherapy.

Tremendous advances have been made in the leukemia field during the last several decades. Our understanding of the biology of different types of leukemia has been significantly improved through a huge amount of basic and clinical research. The application of advanced diagnostic technologies has led to the identification of many new leukemia subtypes with distinct genetic defects. Some of these defects have the potential for targeted therapy. Technological advances have also allowed for the identification of many new prognostic and predictive biomarkers, and the more sensitive detection of minimal residual disease. These biomarkers have significantly contributed to the success of individualized risk stratification and subsequent risk-adapted therapies. The clinical outcomes of all leukemias have been significantly improved. As the most common malignancy in children, pediatric acute lymphoblast leukemia, a fatal disease in the past, has become a highly curable disease with a curable rate of over 80%.

This *Leukemia* book written by an international team has covered many of these achievements. It provides the most up-to-date information on important topics such as new WHO classification, prognostic and predictive biomarkers, minimal residual disease, pharmacogenomics, diagnostic use of flow cytometry, and gives updates on several interesting leukemia entities such as infant leukemia, hairy cell leukemia, acute myeloid leukemia with myelodysplasia-related changes, secondary acute myeloid leukemia, and myeloid/lymphoid neoplasms with PDGFRA rearrangement, respectively. I am sure this book is of great value to a wide audience seeking information in the leukemia field either for clinical purposes or research purposes. It has been my pleasure to preview this interesting book and help bring it forth to readers. I congratulate all the authors for their great work.

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