

Preface

The importance of bone marrow transplantation for patients who do not have a matched sibling donor cannot be overestimated. The availability of matched volunteer donors in the public at large is limited by the remarkable genetic diversity of humans. Thus, although registries of such volunteers now include more than eight million individuals, we still face the problem of finding a matched donor for about 30% of patients in need. To address this burning issue, extensive clinical and investigational use of haploidentical hematopoietic stem cell transplantation is increasing rapidly in leading institutes around the world. This book summarizes the state of the art of these transplants in children and in adults, emphasizing future directions. Prevention of GVHD and graft rejection are clearly satisfactory and disease-free survival rates in acute leukemia patients in remission are similar to rates in transplants from unrelated donors or with cord blood. Since enhancing immune post-transplant reconstitution will improve survival even further, a major part of this book is dedicated to pre-clinical studies investigating how to boost thymus output or use adoptive transfer of immunity against infectious agents or malignant cells. We also present the exciting possibility of durable immune tolerance to donor tissues and organs by means of bone marrow transplantation.

We wish to thank our esteemed colleagues for presenting here their most up to date experience in various aspects of haploidentical stem cell transplantation. We also extend our thanks to Doreen Rosenberg and Geraldine Anne Boyd for their invaluable assistance in bringing this book to fruition.

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