LEARNING OBJECTIVES

On completion of the chapter, the reader will be able to:

1. Describe the different types of donors used in hematopoietic stem cell transplantation (HSCT).
2. Describe the rationale of autologous and allogeneic HSCT as a treatment modality for cancer.
3. Describe the role of human leukocyte antigen typing in identifying matched unrelated donors for allogeneic HSCT.
4. Describe the advantages and disadvantages of different regimens used to mobilize peripheral blood hematopoietic stem cells.
5. Describe the advantages and disadvantages of peripheral blood versus bone marrow in HSCT.
6. Discuss the rationale for various chemotherapeutic agents and total-body irradiation included in pretransplant conditioning regimens.
7. List the types of patients who would be most likely to benefit from posttransplant donor lymphocyte infusions.
8. Describe the rationale for and role of reduced-intensity conditioning transplants compared with myeloablative conditioning transplants.
9. Describe the major causes of morbidity and mortality associated with autologous and allogeneic HSCT.
10. Describe the pathophysiology of and the differences between acute versus chronic graft-versus-host disease.
11. Describe strategies used to prevent and treat graft-versus-host disease and other transplant-related complications.