

## **Unit 14 Objectives: HLA and Transplantation Medicine**

1. List the types of tissues and cells which possess HLA antigens.
2. Describe the importance of HLA antigens.
3. State the function of the major histocompatibility complex (MHC).
4. Explain how the HLA system was discovered.
5. List the HLA antigens included in the class I, II and III categories.
6. Describe how class I and class II antigens function as targets for T lymphocytes.
7. Describe the association between HLA and certain diseases.
8. Briefly describe the principle of the lymphocytotoxicity test for HLA antigens.
9. Briefly describe the principle of the mixed leukocyte culture (MLC) test.
10. Briefly describe donor-recipient testing.
11. Briefly describe the principle of the primed lymphocyte test (PLT).
12. Describe the importance of HLA compatibility as it relates to graft-vs-host disease.
13. List the HLA antigens routinely tested for prior to transplantation.
14. Describe the principle involved in the transfusion of potential kidney transplant patients.
15. Describe the importance of ABO antigens as it relates to organ transplantation.
16. Describe the 2 blood bank protocols utilized in providing blood and blood components for liver transplant patients.
17. Explain why liver transplant programs requires maximal support, cooperation and commitment from all organizations/departments involved.
18. Describe the donor criteria and blood bank support for heart transplants.
19. Describe the transfusion requirements for pancreas transplants.
20. Describe the types of patients who are candidates for autologous bone marrow transplants.
21. Briefly describe the procedure utilized autologous bone marrow transplants.
22. State the transfusion protocols for patients undergoing homologous bone transplants and their importance.
23. Explain why the HLA type is of greater importance than ABO in bone marrow transplants (BMT).
24. Describe the process involved, eventual blood type of recipient and transfusion of BMTs involving a major ABO incompatibility.
25. Describe the procedure utilized when the BMT has a minor side ABO incompatibility.
26. Describe chimerism and how this may occur after BMT.
27. Describe purpose of and the testing performed on potential donors for the National Bone Marrow Donor Registry.
28. Define "hematopoietic stem cells" and "progenitor" cells.
29. List and describe the three types of transplant options available for hematopoietic stem cells.
30. State the advantage of using umbilical cord blood as an alternative to bone marrow transplants.