

Contents

Preface	v
Acknowledgment	vii
Part I	1
Introduction	3
Classification of Lymphoma and Leukemia	3
Morphology of Hematopoietic Cells	8
Comparison Between Flow Cytometry and Immunohistochemistry	22
Monoclonal Antibodies Used for Immunophenotyping	22
Cytogenetic Techniques for Hematologic Neoplasms	24
Molecular Biology Techniques for Hematologic Neoplasms	26
Diagnostic Procedures for Hematologic Neoplasms	27
Part II Case Studies	33
Hematologic Neoplasms	35
Case 1 Chronic myelogenous leukemia, accelerated phase	35
Case 2 Chronic myelogenous leukemia, blast crisis	41
Case 3 Chronic neutrophilic leukemia	45
Case 4 Primary myelofibrosis	50
Case 5 Essential thrombocythemia	57
Case 6 Chronic myelomonocytic leukemia	62
Case 7 Atypical chronic myelogenous leukemia	68
Case 8 Refractory anemia with ring sideroblasts	73
Case 9 Refractory cytopenia with multilineage dysplasia	80
Case 10 5q- syndrome	85
Case 11 Acute myeloid leukemia (AML) with t(8;21)(q22;q22)	91
Case 12 AML with inv(16)	96
Case 13 Acute promyelocytic leukemia	101
Case 14 AML without maturation	107
Case 15 AML with maturation	112
Case 16 Acute myelomonocytic leukemia	116
Case 17 Acute monoblastic leukemia	120
Case 18 Acute monoblastic leukemia with t(8;16)	125
Case 19 Acute erythroid leukemia	129
Case 20 Acute megakaryoblastic leukemia	135
Case 21 Myeloid sarcoma	141
Case 22 Leukemia cutis	146
Case 23 B-lymphoblastic leukemia/lymphoma	152
Case 24 T-lymphoblastic leukemia/lymphoma	157

Case 25 Lymphoblastic lymphoma	161
Case 26 Chronic lymphocytic leukemia	166
Case 27 Richter syndrome	172
Case 28 Small lymphocytic lymphoma	178
Case 29 Paraimmunoblastic variant of small lymphocytic lymphoma	184
Case 30 Prolymphocytic leukemia	188
Case 31 Lymphoplasmacytic lymphoma	194
Case 32 Lymphoplasmacytic lymphoma transformation	200
Case 33 Splenic B-Cell marginal zone lymphoma	204
Case 34 Hairy cell leukemia	211
Case 35 Plasma cell myeloma	218
Case 36 Plasma cell leukemia	224
Case 37 Plasmacytoma	228
Case 38 Extranodal marginal zone lymphoma of the stomach	234
Case 39 Extranodal marginal zone lymphoma of the lung	241
Case 40 Extranodal marginal zone lymphoma of the salivary gland	246
Case 41 Nodal marginal zone lymphoma	252
Case 42 Follicular lymphoma, low-grade	259
Case 43 Follicular lymphoma, high-grade	267
Case 44 Mantle cell lymphoma, mantle zone variant	273
Case 45 Mantle cell lymphoma, blastoid variant	279
Case 46 Mantle cell lymphoma in polyposis	286
Case 47 Diffuse large B-cell lymphoma, immunoblastic type	290
Case 48 Diffuse large B-cell lymphoma, anaplastic type	296
Case 49 T-cell/histiocyte-rich large B-cell lymphoma	301
Case 50 Primary mediastinal (thymic) large B-cell lymphoma	307
Case 51 Intravascular large B-cell lymphoma	314
Case 52 Body cavity lymphoma	319
Case 53 Burkitt lymphoma, lymph node	323
Case 54 Burkitt lymphoma, intestinal	332
Case 55 Burkitt leukemia	339
Case 56 T-cell large granular lymphocytic leukemia	344
Case 57 Adult T-cell leukemia/lymphoma	349
Case 58 Natural killer cell leukemia/lymphoma	354
Case 59 Hepatosplenic T-cell lymphoma	361
Case 60 Subcutaneous panniculitis-like T-cell lymphoma	366
Case 61 Blastic plasmacytoid dendritic cell neoplasm	370
Case 62 Mycosis fungoides/Sézary syndrome	375
Case 63 Primary cutaneous anaplastic large cell lymphoma	381
Case 64 Angioimmunoblastic T-cell lymphoma	385
Case 65 Lymphoepithelioid T-cell lymphoma	393
Case 66 Anaplastic large cell lymphoma, common variant	397
Case 67 Anaplastic large cell lymphoma, small cell variant	402
Case 68 Anaplastic large cell lymphoma, lymphohistiocytic variant	407
Case 69 Hodgkin lymphoma, nodular lymphocyte predominant	415
Case 70 Hodgkin lymphoma, nodular sclerosis	423
Case 71 Hodgkin lymphoma, mixed cellularity	430
Case 72 Hodgkin lymphoma, lymphocyte-rich	434
Case 73 Hodgkin lymphoma, lymphocyte-depleted	439
Case 74 Extranodal Hodgkin lymphoma	443
Case 75 Post-transplant lymphoproliferative disorder	451
Case 76 Langerhans cell histiocytosis	458

Diseases Mimicking Hematologic Neoplasms	465
Case 77 Thymoma	466
Case 78 Growth factor effect	471
Case 79 Hematogones in postchemotherapy bone marrow	475
Case 80 Castleman disease	480
Case 81 Rosai – Dorfman disease	488
Case 82 Kikuchi – Fujimoto disease	493
Case 83 Niemann – Pick disease	497
Case 84 Gaucher disease	501
Case 85 Sarcoidosis	507
Index	513