

Preparing for the American Board
of Pathology (ABPath)
Examination of Fundamental
Knowledge and Skills

Hematopathology

Content Specifications



Overview:

Hematopathology Content Specifications

This guide outlines the content that may appear on the American Board of Pathology’s Hematopathology Subspecialty exam. It provides a framework based on the knowledge and skills typically covered in Fellow-level training, along with applicable Core and Advanced Resident topics from residency training that the trainee is expected to know or be able to perform.

Key to Designations:

C = Core/Foundational Knowledge

AR = Advanced Resident Knowledge

F = Fellow/Advanced Practitioner Knowledge

The exam assesses the knowledge, judgment, skills, and abilities necessary to identify specific entities, properly process specimens, and diagnose and monitor diseases using methods common in the practice of Hematopathology. The specific diseases, tests, and concepts listed in this document are important for candidates to know, but it is not possible to create a fully comprehensive list of all the material needed for certification and effective practice. Candidates should use this guide as a reference for preparing for certification and professional practice.

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1. Testing in Hematology and Hematopathology

a.	General Hematology Testing and Hematology Instruments	
i.	General Consideration	C
ii.	RBC Analysis	C
iii.	WBC Analysis	C
iv.	Platelet Analysis	C
b.	Hemoglobinopathy Analysis	
i.	Alkaline & Acid Electrophoresis	AR
ii.	High Performance Liquid Chromatography (HPLC)	AR
iii.	Capillary Electrophoresis	AR
iv.	Isoelectric Focusing	AR
v.	Advanced Hemoglobinopathy Analysis	F
c.	Specimen Handling & Morphologic Methods	
i.	Bone Marrow Specimen Collection and Processing	C
ii.	Lymph Node Triage and Handling	C
iii.	Staining Methods	
1.	Romanovsky Type Stains	C
2.	Routine and Special Histologic Stains	C
3.	Cytochemical and Advanced Hematology Stains	F
iv.	Peripheral Blood Smear Review	C
v.	Fluid Review	C
vi.	Bone Marrow Review	C
vii.	Review of Other Tissues in Hematopathology	C
d.	Hemostasis and Thrombosis Testing	
i.	Specimen Collection and Processing	C
ii.	Coagulation and Fibrinolysis	AR
iii.	Platelet Testing, including von Willebrand Disease	AR
iv.	Thrombophilia Testing	AR
e.	Immunohistochemistry	
i.	Basic Methods	AR
ii.	Pitfalls	AR
f.	Flow Cytometry	
i.	Basic Methodology	C
ii.	PNH & Other Non-Neoplastic Disease Testing	C
iii.	Lymphoid Testing	C

iv.	Myeloid Testing	C
v.	Advanced Flow Cytometry	F
g.	Cytogenetic Testing	
i.	Classical	AR
ii.	FISH	AR
iii.	Other Cytogenetic Techniques (e.g., aCGH, SNP)	AR
h.	Molecular Testing	
i.	Clonality/Lineage	AR
ii.	Translocations/Mutations	AR
iii.	Other Molecular Assays (e.g., Gene Expression Arrays)	AR
iv.	Coagulation-Related Molecular Testing	AR

2. Normal Anatomy, Histology, Hematopoiesis and Hemostasis

a.	Erythrocytes (RBCs)	C
b.	Leukocytes (WBCs)	C
i.	Myeloid	C
1.	Granulocytes	C
2.	Monocytes/Dendritic Cells	C
3.	Eosinophils/Basophils/Mast Cells	C
4.	Other Myeloid Cells	C
ii.	Lymphoid	C
1.	B-Cells	C
2.	T-Cells	C
3.	NK-Cells	C
4.	Other Lymphoid Cells	C
c.	Plasma Cells	C
d.	Normal Hemostasis & Thrombosis	C
i.	Platelets & Megakaryocytes	C
ii.	Coagulation and Fibrinolysis	C
e.	General Hematopoiesis	C
f.	Peripheral Blood	C
g.	Bone Marrow	C
h.	Lymph Nodes	C
i.	Spleen	C
j.	Thymus	C
k.	Other Lymphoid Tissues (e.g., Tonsils)	C
l.	Pediatric Issues, Including Fetal Hematopoiesis	AR

3. Non-Neoplastic Disorders of Erythrocytes

a.	Anemias	
i.	Iron Deficiency and Related Disorders	C
ii.	Sideroblastic Anemias	
1.	Acquired	AR
2.	Inherited	F
iii.	Erythrocyte Membrane Disorders	
1.	Hereditary Spherocytosis	AR

2.	Hereditary Elliptocytosis	AR
3.	Other Erythrocyte Membrane Disorders (e.g., Spur Cell)	AR
iv.	Erythrocyte Enzyme Disorders	
1.	G6PD	AR
2.	Pyruvate Kinase Deficiency	AR
3.	Other Erythrocyte Enzyme Disorders	AR
v.	Other Hemolytic Anemias	
1.	Immune	C
2.	Non-Immune (e.g., Thermal Injury)	C
3.	Microangiopathic Hemolytic Anemia	C
vi.	Megaloblastic Anemias	C
vii.	Aplastic Anemias	C
viii.	Anemia Related to Chronic Disease & Other Disorders	C
ix.	Congenital Dyserythropoietic Anemia	F
x.	Hemoglobinopathies	
1.	Hb S and Related Disorders	C
2.	Hb C Disorders	AR
3.	Hb E Disorders	AR
4.	Other Hemoglobinopathies	F
xi.	Thalassemias	C
xii.	PNH	C
xiii.	Porphyrias	AR
xiv.	Other Causes of Anemia	
1.	Drugs and Toxins	AR
2.	Diamond-Blackfan Anemia	F
3.	Other Nutritional Deficiencies	F
b.	Erythrocytosis	AR
c.	Cold Agglutinin Disease	AR
d.	Advanced Erythrocyte Abnormalities	AR

4. Non-Neoplastic Disorders of Leukocytes

a.	Inherited Disorders with Morphologic Correlates	
i.	Pelger-Huet Anomaly	C
ii.	Alder-Reilly Anomaly	AR
iii.	Chediak-Higashi Syndrome	AR
b.	Neutrophils – Quantitative & Qualitative Aspects	C
c.	Monocytes – Quantitative & Qualitative Aspects	C
d.	Histiocytic and Dendritic Disorders	
i.	HLH/Macrophage Activation Disorders/Hemophagocytic Disorders	C
ii.	Storage Disorders	AR
iii.	Other Histiocytic and Dendritic Disorders	F
e.	Plasmacytoid Dendritic Cells	F
f.	Lymphocytes – Including Quantitative Aspects	C
g.	Eosinophils and Basophils	C
h.	Plasma Cells	C

- 5. **Multilineage Benign Hematopoietic Disorders**
 - a. Inherited Disorders (e.g., May-Hegglin Anomaly) AR
 - b. Other Benign Hematopoietic Disorders F

- 6. **Infections with Manifestation in the Peripheral Blood**
 - a. Erythrocyte & Plasma Infections
 - i. Malaria C
 - ii. Babesia C
 - iii. Other Erythrocyte & Plasma Infections AR
 - b. Leukocyte Infections
 - i. Infectious Mononucleosis C
 - ii. Anaplasma & Ehrlichia AR
 - iii. Other Infections of Leukocytes (e.g., Fungi including Histoplasma, Pertussis) AR

- 7. **Benign Hematologic Disorders of the Bone Marrow Not Otherwise Classified**
 - a. Infectious Disorders (e.g., Parvovirus) C
 - b. Therapy Related Effects AR
 - c. Bone Abnormalities
 - i. Paget Disease AR
 - ii. Renal Osteodystrophy AR
 - d. Other Benign Disorders of Bone Marrow F

- 8. **Benign Disorders of the Lymphoid Tissues**
 - a. Lymph Node
 - i. Dermatopathic Lymphadenopathy C
 - ii. Cat Scratch Disease AR
 - iii. Toxoplasmosis AR
 - iv. Infectious Mononucleosis AR
 - v. Other Infectious Disorders AR
 - vi. Kikuchi-Fujimoto Disease (i.e., Histiocytic Necrotizing Lymphadenitis) AR
 - vii. Rosai-Dorfman Disease AR
 - viii. Castleman Disease AR
 - ix. Autoimmune Disorders AR
 - x. Non-Lymphoid Inclusions (e.g., Mesothelial) AR
 - xi. Syphilis F
 - xii. Drug-Related (e.g., Phenytoin) F
 - xiii. Other Benign Disorders of the Lymph Nodes F
 - b. Spleen
 - i. Lymphoid Hyperplasias AR
 - ii. Splenic Cysts & Other Non-Neoplastic Proliferations (e.g., Hamartomas) AR
 - c. Thymus
 - i. Thymic Hyperplasia AR
 - ii. Other Benign Thymus Disorders (e.g., Thymoma) AR
 - d. Extranodal Lymphoid Tissue AR

9. Fluid Specimens

- a. CSF C
- b. Other Body Fluids C

10. Immunodeficiency Disorders

- a. Primary Immunodeficiencies F
- b. Secondary Immunodeficiencies
 - i. Viral-Associated F
 - ii. Iatrogenic F
- c. Immunodeficiency-Associated Lymphoproliferative Disorders
 - i. HIV-Associated AR
 - ii. PTLD AR
 - iii. Other Iatrogenic Lymphoproliferative Disorders F

11. Hemostasis and Thrombosis

- a. Coagulation Specimen Collection and Handling C
- b. Coagulation and Fibrinolytic Disorders
 - i. Factor Deficiency or Functional Abnormalities C
 - ii. Factor Inhibitors AR
 - iii. Fibrinolysis AR
- c. Platelet Disorders and von Willebrand Disease
 - i. Qualitative Issues with Normal Platelet Counts C
 - ii. Thrombocytosis C
 - iii. Thrombocytopenia
 - 1. Immune C
 - 2. Inherited AR
 - 3. Other Causes of Thrombocytopenia AR
 - iv. von Willebrand Disease C
 - v. Abnormal Platelet Morphology, Not Otherwise Specified AR
- d. Thrombophilic Disorders
 - i. Heparin Induced Thrombocytopenia C
 - ii. TTP/HUS C
 - iii. DIC C
 - iv. Thrombophilia Testing AR
 - v. Antiphospholipid Syndrome AR
- e. Antiplatelet and Anticoagulant Drugs
 - i. Warfarin and Warfarin Monitoring C
 - ii. Heparin and Heparinoid Monitoring C
 - iii. Direct Thrombin and Factor Xa Inhibitor Measuring AR
 - iv. Antiplatelet Agent Monitoring AR

12. Myeloid Neoplasms

- a. Acquired Myeloid Neoplasm Precursor Conditions (e.g., CHIP, CCUS, VEXAS) AR
- b. Myeloproliferative Neoplasms
 - i. CML (BCR-ABL1+) C
 - ii. Polycythemia Vera AR
 - iii. Primary Myelofibrosis AR

iv.	Essential Thrombocythemia	AR
v.	Chronic Eosinophilic Leukemia, Not Otherwise Specified	AR
vi.	Other Myeloproliferative Neoplasms (e.g., CNL)	F
c.	Mastocytosis	AR
d.	Myeloid & Lymphoid Neoplasms with Eosinophilia and Tyrosine Kinase Fusions	AR
e.	Myelodysplastic/Myeloproliferative Neoplasms	
	i. CMML	C
	ii. Other MDS/MPN Disorders	AR
f.	Juvenile Myelomonocytic Leukemia	F
g.	Myelodysplastic Syndromes	AR
h.	AML and Related Precursor Neoplasms	
	i. AML with Recurrent Genetic Abnormalities	
	1. AML with t(8;21)	AR
	2. AML with inv(16) or t(16;16)	AR
	3. APL with t(15;17)	C
	4. Other AML with Recurrent Genetic Abnormalities	F
	ii. AML Myelodysplasia-Related	AR
	iii. Therapy-Related Myeloid Neoplasms	AR
	iv. AML, Not Otherwise Specified	
	1. Acute Monoblastic/Monocytic Leukemia	AR
	2. Acute Erythroid Leukemia	F
	3. Acute Megakaryoblastic Leukemia	F
	4. Other AML, Not Otherwise Specified	F
	v. Myeloid Sarcoma	AR
	vi. Myeloid Proliferations Associated with Germline Predisposition	AR
	1. Myeloid Proliferations with Down Syndrome	AR
	vii. Blastic Plasmacytoid Dendritic Cell Neoplasm	AR
	viii. Germline Predisposition to Myeloid Neoplasia	F

13. Acute Leukemias of Ambiguous Lineage F

14. Lymphoid Neoplasms

a.	B Lymphoblastic Leukemia/Lymphoma	
	i. B Lymphoblastic Leukemia/Lymphoma, Not Otherwise Specified	AR
	1. B Lymphoblastic Leukemia/Lymphoma with Recurrent Genetic Abnormalities	AR
	ii. Other B Lymphoblastic Leukemias & Lymphomas	F
b.	T Lymphoblastic Leukemia/Lymphoma	C
c.	Mature B-cell Neoplasms	
	i. CLL/SLL including Monoclonal B-cell Lymphocytosis	C
	ii. MALT Lymphoma	C
	iii. Follicular Lymphoma	C
	iv. Mantle cell Lymphoma	C
	v. Large cell Lymphomas	
	1. Diffuse Large B-cell Lymphoma, Not Otherwise Specified	C
	2. Primary Mediastinal Large B-cell Lymphoma	AR
	3. Other Large B-cell Lymphomas	F

vi.	Burkitt Lymphoma	C
vii.	Splenic Marginal Zone Lymphoma (SMZL)	AR
viii.	Hairy Cell Leukemia (HCL)	AR
ix.	Lymphoplasmacytic Lymphoma (LPL)	AR
x.	Nodal Marginal Zone Lymphoma (MZL)	AR
xi.	In situ Lymphoid Neoplasia	F
d.	Mature T- and NK-cell Neoplasms	
i.	T-cell and NK-cell LGL	C
ii.	Extranodal NK/T-cell Lymphoma, Nasal Type	C
iii.	Anaplastic Large Cell Lymphoma (ALK + and ALK -)	C
iv.	T-cell PLL	AR
v.	Adult T-cell Leukemia/Lymphoma	AR
vi.	Hepatosplenic T-cell Lymphoma	AR
vii.	Mycosis Fungoides & Sézary Syndrome	AR
viii.	PTCL, Not Otherwise Specified	AR
ix.	Angioimmunoblastic T-cell Lymphoma	AR
x.	Enteropathy-Associated T-cell Lymphoma and Other Intestinal T-cell Lymphomas	F
xi.	CD30+ Cutaneous Lymphoproliferative Disorders	F
xii.	Other Cutaneous T-cell Lymphomas	F
xiii.	Other Mature T- and NK-cell Neoplasms	F
e.	Hodgkin Lymphoma	
i.	Nodular Lymphocyte Predominant	C
ii.	Classic	C

15. Plasma Cell Neoplasms, Paraprotein Disorders, & Amyloidosis

a.	Plasma cell Myeloma, Monoclonal Gammopathy of Unknown Significance (MGUS)	C
b.	Amyloidosis	C
c.	Cryoglobulinemia	AR
d.	POEMS (Polyneuropathy, Organomegaly, Endocrinopathy/Edema, Monoclonal Protein, and Skin Changes)	AR

16. Histiocytic/Dendritic Cell Neoplasms

a.	Langerhans cell Histiocytosis/Sarcoma	AR
b.	Follicular Dendritic Cell Sarcoma	F
c.	Histiocytic Sarcoma	F
d.	Other Histiocytic/Dendritic Neoplasms	F

17. Metastatic Neoplasms

a.	Metastases to the Bone Marrow	C
b.	Metastases to the Lymph Nodes	C
c.	Metastases to Other Lymphoid Tissue	C

18. Hematology & Hematopathology-Specific Administration & Laboratory Management

a.	Hematology & Hematopathology Laboratory Management	F
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| b. Rules and Regulations | F |
| c. Laboratory Inspections | F |
| d. QA/QC Issue | F |
| e. Other Administration/Laboratory Management Issues | F |