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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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b. Hemoglobinopathy Analysis	
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ii. High Performance Liquid Chromatography (HPLC)	AR
iii. Capillary Electrophoresis	AR
iv. Isoelectric Focusing	AR
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2. Routine and Special Histologic Stains	C
3. Cytochemical and Advanced Hematology Stains	F
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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. Leucocytes (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
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    4. Other Lymphoid Cells — C
- c. Plasma Cells — C
- d. Normal Hemostasis & Thrombosis — C
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- 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
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xii.	PNH	C
xiii.	Porphyrias	AR
xiv.	Other Causes of Anemia	
	1. Lead Poisoning	AR
	2. Diamond-Blackfan Anemia	F
b.	Erythrocytosis	AR
c.	Cold Agglutinin Disease	AR
d.	Advanced Erythrocyte Abnormalities	AR

4. Non-Neoplastic Disorders of Leucocytes

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 Disorders	
i.	HLH/Macrophage Activation Disorders/Hemophagocytic Disorders	C
ii.	Storage Disorders	AR
iii.	Other Histocytic Disorders (e.g., Prosthetic Associated Histiocyte Proliferation)	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. Leucocyte Infections		
	i. Infectious Mononucleosis	C
	ii. Anaplasma & Ehrlichia	AR
	iii. Other Infections of Leucocytes (e.g., Fungi including Histoplasma, Pertussis)	AR

7. Benign Hematologic Disorders of the Bone Marrow Not Otherwise Classified

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b. Therapy Related Effects		AR
c. Bone Abnormalities		
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	ii. Renal Osteodystrophy	AR
d. Other Benign Disorders of Bone Marrow		F

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a. Lymph Node		
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	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 and Fibrinolytic Disorders		
	i. Factor Deficiency or Functional Abnormalities	C
	ii. Factor Inhibitors	AR
	iii. Fibrinolysis	AR
b. 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
c. Thrombophilic Disorders		
	i. Heparin Induced Thrombocytopenia	C
	ii. TTP/HUS	C
	iii. DIC	C
	iv. Laboratory Diagnosis of Thrombosis and Thrombophilia	AR
	v. Fibrinolytic Thrombotic Disorders	AR
	vi. Antiphospholipid Antibody Syndrome	AR
d. Antiplatelet and Anticoagulant Drugs		
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	ii. Heparin and Heparinoid Monitoring	C
	iii. Direct Thrombin and Factor Xa Inhibitor Monitoring	AR
	iv. Antiplatelet Agent Monitoring	AR
12. Myeloid Neoplasms		
a. 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. Mastocytosis	AR

vii.	Other Myeloproliferative Neoplasms (e.g., CNL)	F
b.	Myeloid & Lymphoid Neoplasms with Eosinophilia and Gene Rearrangements	
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ii.	PDFGRB	AR
iii.	FGFR1	AR
iv.	PCM1-JAK2	AR
c.	Myelodysplastic/Myeloproliferative Neoplasms	
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1.	Atypical CML	AR
2.	BCR-ABL1	AR
iii.	Juvenile Myelomonocytic Leukemia	
d.	Myelodysplastic Syndromes	AR
e.	AML and Related Precursor Neoplasms	
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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.	AML with t(9;11)	F
5.	Other AML with Recurrent Genetic Abnormalities	F
ii.	AML with Myelodysplasia-Related Changes	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 with Germline Predisposition	F
1.	Myeloid Proliferations with Down Syndrome	AR
vii.	Blastic Plasmacytoid Dendritic Cell Neoplasm	AR
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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
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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
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16. Histiocytic/Dendritic Cell Neoplasms

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17. Metastatic Neoplasms

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