

Transplant Hepatology

Maintenance of Certification Examination (MOC)



High Relevance: Topics are very likely to appear on the assessment.

Medium Relevance: Topics are moderately likely to appear on the assessment.

Low Relevance: Topics will not appear on the assessment.

| Blueprint Code and Topic | Assessment Percentage | Diagnosis/Testing 30% | Treatment/Care Decisions 45% | Risk Assessment /Prognosis /Epidemiology 18% | Pathophysiology /Basic Science 7% |
|---|-----------------------|--------------------------|---------------------------------|---|--------------------------------------|
| 1 Advanced Hepatology and Pretransplant | 55% | | | | |
| 1.1 Biliary atresia | <2% | LOW | MEDIUM | MEDIUM | LOW |
| 1.2 Genetic liver disease | 4% | HIGH | HIGH | MEDIUM | MEDIUM |
| 1.2.1 Cholestatic syndromes, including progressive familial intrahepatic cholestasis, benign recurrent intrahepatic cholestasis, and Alagille syndrome | | | | | |
| 1.2.2 Hereditary hemorrhagic telangiectasia | | | | | |
| 1.2.3 Wilson disease | | | | | |
| 1.2.4 Alpha-1 antitrypsin deficiency | | | | | |
| 1.2.5 Iron overload syndromes | | | | | |
| 1.2.6 Mitochondrial hepatopathy | | | | | |
| 1.2.7 Urea cycle disorders | | | | | |
| 1.2.8 Cystic fibrosis | | | | | |
| 1.2.9 Fibrocystic diseases, including Caroli disease and choledochal cysts | | | | | |
| 1.2.10 Familial amyloid polyneuropathy | | | | | |
| 1.2.11 Disorders of bilirubin metabolism, including Gilbert syndrome, Crigler-Najjar syndrome,Rotor syndrome, Dubin-Johnson syndrome, bile acid synthesis disorders | | | | | |
| 1.2.12 Porphyria, including erythropoietic protoporphyrin and acute hepatic porphyria | | | | | |
| 1.2.13 Glycogen storage diseases | | | | | |
| 1.3 Autoimmune disorders | 7% | HIGH | HIGH | HIGH | MEDIUM |
| 1.3.1 Primary biliary cholangitis | | | | | |
| 1.3.2 Autoimmune hepatitis | | | | | |
| 1.3.3 Primary sclerosing cholangitis | | | | | |
| 1.3.4 Overlap syndromes | | | | | |
| 1.3.5 Autoimmune cholangiopathy and IgG4 cholangiopathy | | | | | |
| 1.3.6 Sarcoidosis | | | | | |
| 1.3.7 Celiac disease | | | | | |
| 1.4 Viral hepatitis | 3% | HIGH | HIGH | HIGH | MEDIUM |
| 1.4.1 Hepatitis A (HAV) including vaccination and prevention strategies | | | | | |
| 1.4.2 Hepatitis B (HBV) including vaccination and prevention strategies | | | | | |
| 1.4.3 Hepatitis C (HCV) | | | | | |
| 1.4.4 Hepatitis D (HDV) | | | | | |
| 1.4.5 Hepatitis E (HEV) | | | | | |
| 1.4.6 Nonhepatotropic viruses, including Epstein-Barr virus, herpes simplex virus, cytomegalovirus, and SARS-CoV-2 | | | | | |
| 1.5 Congestive hepatopathy, including Budd-Chiari syndrome, sinusoidal obstruction syndrome, Fontan-associated liver disease, and sickle cell hepatopathy | 3% | HIGH | HIGH | MEDIUM | MEDIUM |

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| 1.5.1 Budd-Chiari syndrome | | | | | |
| 1.5.2 Sinusoidal obstruction syndrome | | | | | |
| 1.5.3 Congestive hepatopathy due to underlying cardiac disease, including Fontan-associated liver disease, right heart failure, and constrictive/restrictive cardiomyopathy | | | | | |
| 1.5.4 Sickle cell hepatopathy | | | | | |
| 1.6 Portosinusoidal vascular disease, including nodular regenerative hyperplasia | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 1.7 Splanchnic vascular disorders, including portal vein thrombosis and portosystemic shunts | 2% | HIGH | HIGH | HIGH | MEDIUM |
| 1.8 Portal hypertension complications | 7% | HIGH | HIGH | HIGH | HIGH |
| 1.8.1 Varices | | | | | |
| 1.8.2 Ascites | | | | | |
| 1.8.3 Encephalopathy | | | | | |
| 1.8.4 Spontaneous bacterial peritonitis | | | | | |
| 1.8.5 Coagulopathy | | | | | |
| 1.8.6 Hepatic hydrothorax | | | | | |
| 1.8.7 Hepatopulmonary syndrome and portopulmonary hypertension | | | | | |
| 1.8.8 Kidney injury in the setting of portal hypertension, including <i>HRS-acute kidney injury and HRS-chronic kidney disease</i> | | | | | |
| 1.8.9 Cirrhotic cardiomyopathy | | | | | |
| 1.8.10 Hyponatremia | | | | | |
| 1.9 Liver tumors | 5% | HIGH | HIGH | HIGH | MEDIUM |
| 1.9.1 Hepatocellular carcinoma, including fibrolamellar | | | | | |
| 1.9.2 Hepatoblastoma | | | | | |
| 1.9.3 Cholangiocarcinoma | | | | | |
| 1.9.4 Metastatic, including neuroendocrine and colorectal tumors | | | | | |
| 1.9.5 Hepatic adenomas | | | | | |
| 1.9.6 Focal nodular hyperplasia | | | | | |
| 1.9.7 Hemangioma | | | | | |
| 1.9.8 Hepatic epithelioid hemangioendothelioma | | | | | |
| 1.10 Selection and evaluation for transplantation | 3% | HIGH | HIGH | HIGH | MEDIUM |
| 1.10.1 Pediatric End-Stage Liver Disease model (PELD) and Model for End-Stage Liver Disease (MELD) | | | | | |
| 1.10.2 Psychosocial issues | | | | | |
| 1.10.3 Living-donor selection | | | | | |
| 1.10.4 Impact of active infection and malignancy | | | | | |
| 1.10.5 Simultaneous liver-kidney transplant and related policies | | | | | |
| 1.10.6 Co-morbidities, including human immunodeficiency virus [HIV] infection | | | | | |
| 1.10.7 Frailty and malnutrition | | | | | |
| 1.11 Acute liver failure | 4% | HIGH | HIGH | HIGH | HIGH |
| 1.11.1 Toxic injury | | | | | |
| 1.11.2 Drug-induced | | | | | |
| 1.11.3 Viral | | | | | |
| 1.11.4 Indeterminant | | | | | |
| 1.11.5 Hypoperfusion syndromes | | | | | |
| 1.11.6 Immune-mediated, including autoimmune hepatitis, hemophagocytic lymphohistiocytosis | | | | | |

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| 1.11.7 Genetic (metabolic) | | | | | |
| 1.11.8 Pregnancy-related acute liver failure | | | | | |
| 1.11.9 Infiltrative malignancy | | | | | |
| 1.12 Alcohol-associated liver disease, including complications and liver transplantation | 3% | HIGH | HIGH | HIGH | MEDIUM |
| 1.13 Metabolic dysfunction-associated steatotic liver disease, including metabolic dysfunction-associated steatohepatitis and metabolic dysfunction- and alcohol-associated liver disease | 4% | HIGH | HIGH | HIGH | HIGH |
| 1.14 Liver diseases of pregnancy | <2% | HIGH | HIGH | MEDIUM | MEDIUM |
| 1.15 Drug-induced liver injury | <2% | HIGH | HIGH | HIGH | MEDIUM |
| 1.16 Acute-on-chronic liver failure | <2% | HIGH | HIGH | HIGH | MEDIUM |
| 1.17 Palliative care | 2% | MEDIUM | MEDIUM | MEDIUM | LOW |
| 1.18 Health maintenance, including vaccination, cancer screening, metabolic health, and reproductive health | 3% | HIGH | HIGH | HIGH | LOW |
| 1.18.1 Vaccination | | | | | |
| 1.18.2 Preventive screening | | | | | |
| 1.18.3 Transition of care | | | | | |
| 1.18.4 Reproductive health | | | | | |
| 1.18.5 Bone health | | | | | |
| 1.18.6 Quality of life | | | | | |
| 2 Peritransplant | 14% | | | | |
| 2.1 Deceased-donor selection | 3% | HIGH | HIGH | HIGH | MEDIUM |
| 2.1.1 Steatosis | | | | | |
| 2.1.2 Viral infection | | | | | |
| 2.1.3 Donor type (brain versus circulatory death) | | | | | |
| 2.1.4 Machine perfusion | | | | | |
| 2.2 Living-donor selection | 2% | HIGH | HIGH | HIGH | LOW |
| 2.2.1 Donor evaluation, including size | | | | | |
| 2.2.2 Donor complications | | | | | |
| 2.3 Donor considerations, including split-graft, vascular, and ABO compatibility | 2% | HIGH | HIGH | MEDIUM | MEDIUM |
| 2.3.1 Split-graft | | | | | |
| 2.3.2 Vascular | | | | | |
| 2.3.3 ABO incompatibility | | | | | |
| 2.4 Perioperative complications | 5% | HIGH | HIGH | HIGH | MEDIUM |
| 2.4.1 Early allograft dysfunction, including primary nonfunction | | | | | |
| 2.4.2 Early vascular complications | | | | | |
| 2.4.3 Small-for-size syndrome | | | | | |
| 2.4.4 Infection prophylaxis, including cytomegalovirus, Epstein-Barr virus, <i>Pneumocystis jirovecii</i> pneumonia, other fungal | | | | | |
| 2.4.5 Hepatitis B and C antiviral therapy | | | | | |
| 2.4.6 Drug toxicity, including neurotoxicity and nephrotoxicity | | | | | |
| 2.5 Donor transmission of infectious and noninfectious diseases | 2% | HIGH | HIGH | MEDIUM | MEDIUM |
| 3 Post-transplant | 20% | | | | |
| 3.1 Immune complications | 4% | HIGH | HIGH | HIGH | MEDIUM |
| 3.1.1 Rejection, including acute T cell-mediated, plasma cell-rich, antibody-mediated, and chronic rejection | | | | | |
| 3.1.2 Alloimmune and autoimmune diseases (<i>de novo</i>) | | | | | |
| 3.1.3 Graft-versus-host disease | | | | | |

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| 3.2 Nonimmune graft complications | 2% | HIGH | HIGH | HIGH | MEDIUM |
| 3.2.1 Biliary | | | | | |
| 3.2.2 Vascular | | | | | |
| 3.3 Extrahepatic complications | 5% | HIGH | HIGH | MEDIUM | MEDIUM |
| 3.3.1 Metabolic, including diabetes mellitus and obesity | | | | | |
| 3.3.2 Renal | | | | | |
| 3.3.3 Bone | | | | | |
| 3.3.4 Nutrition | | | | | |
| 3.3.5 Cardiovascular | | | | | |
| 3.3.6 Post-transplant <i>de novo</i> malignancy, including post-transplantation lymphoproliferative disorder, surveillance strategies | | | | | |
| 3.4 Infectious complications | 3% | HIGH | HIGH | HIGH | MEDIUM |
| 3.4.1 Viral infections, including cytomegalovirus, Epstein-Barr virus, hepatitis B, hepatitis C, and hepatitis E | | | | | |
| 3.4.2 Bacterial infections | | | | | |
| 3.4.3 Fungal infections | | | | | |
| 3.4.4 Emerging infections | | | | | |
| 3.5 Recurrence of disease, including immune, infectious, cancer, metabolic, and lifestyle-related | 3% | HIGH | HIGH | MEDIUM | MEDIUM |
| 3.6 Health maintenance, including vaccination, cancer screening, metabolic health, and reproductive health | 3% | HIGH | HIGH | MEDIUM | LOW |
| 3.6.1 Vaccination | | | | | |
| 3.6.2 Preventive screening | | | | | |
| 3.6.3 Transition of care | | | | | |
| 3.6.4 Reproductive health | | | | | |
| 3.6.5 Bone health | | | | | |
| 3.6.6 Quality of life | | | | | |
| 4 Transplant Immunology | 6% | | | | |
| 4.1 Clinically relevant immunology | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 4.2 Immunosuppressive medications, including mechanism of action, pharmacokinetics, adverse effects, and drug-drug interactions | 5% | HIGH | HIGH | HIGH | HIGH |
| 4.2.1 Cyclosporine and tacrolimus | | | | | |
| 4.2.2 Mycophenolate mofetil (MMF), mycophenolic acid (MPA), and azathioprine | | | | | |
| 4.2.3 Sirolimus and everolimus | | | | | |
| 4.2.4 Antibody therapy, including interleukin-2 receptor, antithymocyte globulin T-cell depleting | | | | | |
| 4.2.5 Corticosteroids | | | | | |
| 5 Ethics and Regulatory Issues | 5% | | | | |
| 5.1 Ethics | 2% | MEDIUM | MEDIUM | MEDIUM | LOW |
| 5.1.1 Psychosocial evaluation | | | | | |
| 5.1.1.1 Substance use disorders | | | | | |
| 5.1.1.2 Adherence | | | | | |
| 5.1.2 Living-donor transplantation | | | | | |
| 5.1.3 Disparities in care, including social determinants of health | | | | | |
| 5.1.4 Clinical trials | | | | | |
| 5.2 Organ transplant policy | 3% | MEDIUM | MEDIUM | MEDIUM | LOW |
| 5.2.1 Organ Procurement and Transplantation Network, including structure and oversight | | | | | |

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| 5.2.2 Final rule | | | | | |
| 5.2.3 Organ allocation | | | | | |
| 5.2.4 Standard and nonstandard exceptions to MELD system, including tumor, hepatopulmonary syndrome, metabolic liver disease | | | | | |
| 5.2.5 Outcome metrics | | | | | |