General Board Preparation

Oren Fix, MD, MSc, FAASLD
Medical Director, Liver Transplant Program
Swedish Medical Center, Seattle, WA

Clinical Associate Professor
Washington State University
Elson S. Floyd College of Medicine

- No relevant financial disclosures
ABIM Exam Schedule

- 4 sessions x max 60 questions each = max 240 questions
- 2 hours per session = ~2 min per question
- Up to 100 minutes of breaks divided between 3 optional breaks between sessions
- Up to 10 hours (including instructions, optional tutorial, optional exit survey)

Exam Principles

- The exam is written to a curriculum (ABIM blueprint)
- There is no intention to trick you
- Understand how the questions are constructed
ABIM Exam Content

<table>
<thead>
<tr>
<th>Medical Content Category</th>
<th>% of Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretransplant</td>
<td>45%</td>
</tr>
<tr>
<td>Perioperative</td>
<td>20%</td>
</tr>
<tr>
<td>Post-transplant</td>
<td>25%</td>
</tr>
<tr>
<td>Transplant Immunology</td>
<td>5%</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>5%</td>
</tr>
</tbody>
</table>

100%

ABIM Blueprint

**Pretransplant** 45% of Exam
- Biliary atresia (pediatrics only)
- Genetic liver disease
  - Cholestatic syndromes (including progressive familial intrahepatic cholestasis [PFIC])
  - Hereditary hemochromatosis (internal medicine only)
  - Wilson disease
  - Alpha-1-antitrypsin deficiency
  - Inborn metabolic defects

**Perioperative** 20% of Exam
- Donor selection
- Extended criteria donors
- Sepsis
- Infection
- Donor live transplantation
- Auxiliary transplantation
- Surgical options, complications specific to graft and donor types (including ABO blood type)
- Perioperative complications
  - Initial poor function or primary nonfunction
  - Vascular complications
  - Infections (viral, bacterial, and fungal)

**Post-transplant** 25% of Exam
- Immune complications
  - Rejection
  - Graft-versus-host disease
  - Allograft and autoimmune diseases (diabetes mellitus)
- Non-immune complications
  - Diabetes mellitus
  - Renal

**Transplant Immunology** 9% of Exam
- Basic immunology
  - In vivo and septic immune system
  - Immune reactivity
  - Tolerance
- Mechanism of action and pharmacokinetics (PK) of immunosuppressive medications
- Cyclosporine and tacrolimus

**Miscellaneous** 5% of Exam
- Statistics
  - Kaplan-Meier (KM)
  - Cox proportional hazards
- Relative risk
- Ethics
  - Role of apheresis in organ donation

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Question Format

- All single best answer
  - No “all of the above”, “none of the above”, “A, B, and C”
- No negative constructions (“not”, “except”)
- Majority with a clinical stem
- Every element of the stem is essential
- Application of knowledge as opposed to recall

Question Construction

- Start with the curriculum
- Choose learning objective/teaching point
  - Is it worth knowing?
- Construct scenario around the learning objective
  - Avoid unnecessary details
- Write the correct answer
  - Evidence based, not controversial
- Write “distractors”
  - Test the same teaching point, plausible but definitely incorrect
Question Construction

A 49-year-old woman undergoes deceased donor liver transplantation for decompensated cirrhosis. Biopsy of the donor at time of procurement revealed 30% microvesicular steatosis. On postoperative day 3, the recipient remains intubated in the SICU, hypothermic and on vasopressors. She is noted to have elevated total bilirubin, aminotransferases and INR. Ultrasonography of the liver with Duppler reveals slightly increased resistive indices in the hepatic artery with patent portal vein.

Current labs are as follows:
AST 2405 [10-40 U/L]
ALT 21.76 [10-40 U/L]
Total bilirubin 14.1 [0.3-1.0 mg/dL]
INR 3.7 [<1.1]

What is the next best step in management of this patient?

A. High dose methylprednisolone
B. Hepatic artery arteriogram
C. Endoscopic retrograde cholangiopancreatography
D. Re-list for liver transplantation

Study Preparation

- Review the ABIM blueprint (this course will help!)
- Take the online tutorial on the ABIM website
UpToDate

- Available for MOC exams only
- Make sure you’re familiar with the site
- Tips for using UTD during ABIM exams
  - Do not use UTD until you’ve gone through all the questions
  - Only use UTD to select from 2 remaining choices
  - Do not use UTD to confirm answers you are mostly sure about

Study Resources

- Know the AASLD Practice Guidelines (and other society guidelines)
- CLD Board Prep Practice Questions
- 2018 Transplant Hepatology Board Review Course and Question Supplement
- “Board”-style questions from this course
AASLD PRACTICE GUIDELINES AND GUIDANCES

ACUTE LIVER FAILURE, MANAGEMENT

ALCOHOL-ASSOCIATED LIVER DISEASE

ASCITES DUE TO CIRRHOSIS, MANAGEMENT

AUTOIMMUNE HEPATITIS, MANAGEMENT

HEMOCHROMATOSIS

September 2011

- Corrections to the AASLD Position Paper: The Management of Acute Liver Failure: Update 2011 William M. Lee, MD, 1 Anne M. Larson,

The present version of the American Association for the Study of Liver Diseases (AASLD) Position Paper represents a thorough overhaul from the previous version of 2005. In addition to two new additional authors, the revision includes updated expert opinion regarding (1) etiologies and diagnosis, (2) therapies and intensive care management, and (3) prognosis and transplantation. We offer three publications.
Board Prep Practice Questions

Clinical Liver Disease (CLD) is an official digital learning resource of The American Association for the Study of Liver Diseases. This interactive, up-to-date source of education is designed for physicians and healthcare providers caring for the patient with liver disease.

CLD offers a series of board-style question banks designed to help you determine which articles, videos, audios, and issues are most useful to your practice. Test your knowledge on each of the following subjects to identify topic areas for further review:

Alcoholic Liver Disease
Autoimmune Liver Disease
Cirrhosis and Kidney Function
Drug-Induced Liver Injury (DILI)
Heavy Metals and the Liver
Hepatitis A, D, and E
Hepatitis B
Hepatitis C
Hepatocellular Carcinoma
Liver Disease in Children
Liver and the Microbiome
Liver-Lung Syndromes
Liver Surgery
Liver Transplantation
Non-alcoholic Fatty Liver Disease
Pathology of the Liver
Pediatric Liver Patient
Pregnancy and the Liver
Portal Hypertension
Vascular Disorders

Test your knowledge with an interactive case study:
Elevated Serum Aminotransferase: A Known But Under-Recognized Cause

Clinical Liver Disease
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Complete this set of board-style practice questions to test your knowledge.

Go to www.LiverLearning.com to get quick and easy articles, podcasts, interviews with experts, and CME learning activities, all designed to meet the needs of busy physician and healthcare provider learners.
A 25-year-old woman with long-standing asthma was incidentally found to have a liver lesion on images from her chest CT. A delayed CT of the abdomen with intravenous contrast shows the lesion as a 7-cm central attenuation enhancing mass (see figure) with enhancement on venous phase and no definite washout on delayed images. No definitive central scar is noted. The best option appears morphologically normal. Her laboratory results are as follows:

<table>
<thead>
<tr>
<th>Test</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST</td>
<td>35</td>
</tr>
<tr>
<td>ALT</td>
<td>54</td>
</tr>
<tr>
<td>Albumin</td>
<td>3.8</td>
</tr>
<tr>
<td>Absolute count</td>
<td>4500</td>
</tr>
<tr>
<td>HCT</td>
<td>36.8</td>
</tr>
<tr>
<td>Platelet count</td>
<td>242,000</td>
</tr>
</tbody>
</table>

What is the next best step in her management?

A. No further work-up needed
B. Repeat imaging in 12 months
C. Biopsy the lesion
D. Perform surgical resection
E. Start transplant evaluation