Specific Basic Standards for
Osteopathic Fellowship Training in
Transplant Hepatology

American Osteopathic Association
and
American College of Osteopathic Internists

Adopted BOT 8/2012
These specific basic standards are part of the *Common Basic Standards for Fellowship Training in Internal Medicine Subspecialties*, which govern and define training in all medical subspecialties. These requirements are in addition to all requirements in the Common Basic Standards.

**IV – INSTITUTIONAL REQUIREMENTS**

4.1 The base institution or an affiliate must assume ultimate responsibility for the program, as described in the Institutional Requirements, and this Transplant Hepatology responsibility extends to fellow assignments at all participating sites.

4.2 The transplant hepatology fellowship must be affiliated with an AOA-accredited fellowship in gastroenterology.

4.3 The base institution or an affiliate must provide the program director with adequate support for the administrative activities of the Transplant Hepatology subspecialty program fellowship.

4.4 The base institution or an affiliate must demonstrate that there is a culture of continuous quality improvement in the areas of patient care, patient safety, and education.

4.5 The base institution or an affiliate must demonstrate a commitment to quality patient-centered care and safety, education, research and scholarship sufficient to support the fellowship program and share appropriate inpatient and outpatient faculty performance data with the program director.

4.6 The primary clinical training site must have services available from other health care professionals, including dietitians, language interpreters, occupational therapists, physical therapists and social workers.

4.7 The primary clinical training site must have interventional radiology facilities capable of performing balloon angioplasty and transjugular intrahepatic portal systemic shunt.

4.8 The primary clinical site must have a liver transplant program that is a member in good standing of the United Network for Organ Sharing (UNOS) and is affiliated with an AOA-accredited gastroenterology fellowship program.

4.9 The primary clinical site must have a patient population with a variety of clinical problems and stages of disease, broad age range and sufficient number of patients available to achieve the required educational outcomes.
4.10 The primary clinical site must perform 20 liver transplantations per year for each fellow in the program.

V – PROGRAM REQUIREMENTS AND CONTENT

A. Program Duration

5.1 The fellowship program in transplant hepatology program must be 12 months in duration.

5.2 Prior to entry into the Transplant Hepatology fellowship fellows must have satisfactorily completed a three year AOA-approved residency in Internal Medicine and shall have satisfactorily completed a three year AOA-approved gastroenterology fellowship.

B. Medical Knowledge

5.3 The fellow must have learning activities in anatomy, physiology, pharmacology, pathology, and molecular virology related to the liver and biliary tract.

5.4 The fellow must have learning activities in drug hepatotoxicity and the interaction of drugs with the liver.

5.5 The fellow must have learning activities in the impact of various modes of therapy and the appropriate use of laboratory tests and procedures.

5.6 The fellow must have learning activities in the natural history of chronic liver disease.

5.7 The fellow must have learning activities in the factors involved in nutrition and malnutrition and their management.

5.8 The fellow must have learning activities in the organizational and logistic aspects of liver transplantation, including the role of nurse coordinators and other support staff (e.g., including social work), organ procurement, and UNOS policies, including those regarding organ allocation.

5.9 The fellow must have learning activities in the principles and application of artificial liver support.

5.10 The fellow must have learning activities in the principles of donor selection and rejection (e.g., hemodynamic management, donor organ steatosis, and indication for liver biopsy).
5.11 The fellow must have learning activities in the principles of living donor selection, including appropriate surgical, psychosocial and ethical considerations.

5.12 The fellow must have learning activities in the principles and practice of pediatric liver transplantation.

5.13 The fellow must have learning activities in transplant immunology, including blood group matching, histocompatibility, tissue typing, and infectious and malignant complications of immunosuppression; and indications for, contraindications for, and complications of allograft biopsies.

C. Patient Care

5.14 The fellow must have training and experience in the comprehensive management of patients high on the transplant list and in the intensive care setting with complications of end-stage liver disease, including refractory ascites, hepatic hydrothorax, hepatorenal syndrome, hepatopulmonary and portal pulmonary syndromes, and refractory portal hypertensive bleeding.

5.15 The fellow must have training and experience in the diagnosis and management of hepatocellular carcinoma and cholangiocarcinoma, including transplantation, and non-transplantation, and surgical, and non-surgical approaches.

5.16 The fellow must have training and experience in the ethical considerations relating to liver transplant donors, including questions related to living donors, non heart beating donors, criteria for brain death, and appropriate selection of recipients in the care of transplant patients.

5.17 The fellow must have training and experience in the evaluation and management of both inpatients and outpatients with acute and chronic end-stage liver disease.

5.18 The fellow must have training and experience in the management of chronic viral hepatitis in the pre-transplantation, peri-transplantation, and post-transplantation settings.

5.19 The fellow must have training and experience in the management of fulminant liver failure.

5.20 The fellow must have training and experience in nutritional support of patients with chronic liver disease.

5.21 The fellow must have training and experience in the performance of percutaneous liver biopsies, including allograft (each fellow must perform at least 30).
5.22 The fellow must have training and experience in the prevention of acute and chronic end-stage liver disease.

5.23 The fellow must have training and experience in the psychosocial evaluation of all transplant candidates, in particular those with a history of substance abuse.

5.24 The fellow must have training and experience in the use of interventional radiology in the diagnosis and management of portal hypertension, as well as biliary and vascular implications.

D. **Ambulatory Clinic**

5.25 An ambulatory clinic experience must be incorporated within the training program. The duration and time spent in the ambulatory clinic will be determined by each institution.

5.26 The fellow must maintain a log of all outpatient cases.

E. **Rotational Curriculum**

5.26 The fellow must participate in primary evaluation, presentation, and discussion at selection conferences of at least 10 potential transplant candidates.

5.27 The fellow must provide follow-up for at least 20 new liver transplant recipients for a minimum of three months from the time of their transplantation.

5.28 The fellow must gain familiarity and expertise with the management of common long-term problems such as cardiovascular disease, acute and chronic kidney injury, screening for malignancies, and diagnosis and treatment of recurrent disease.

5.29 The fellow must participate in the follow-up of 20 or more liver transplant recipients who have survived more than one year after transplantation. There must be a minimum six-month follow-up period for each patient to ensure longitudinal care of transplant recipients.

5.30 The fellow must actively participate in the transplant recipients’ medical care, including management of acute cellular rejection, recurrent disease, infectious diseases, and biliary tract complications, and must serve as a primary member of the transplantation team and participate in making decisions about immunosuppression.

5.31 The fellows and faculty in the program must share patient co-management responsibilities with transplant surgeons from the pre-operative phase to the outpatient period.
5.32 The program must ensure close interactions and education with an experienced liver transplant pathologist.

5.33 Fellows must observe in one cadaveric liver procurement and three liver transplant surgeries.

5.34 Fellows must have formal instruction and clinical experience in interpretation of the following diagnostic and therapeutic techniques and procedures:

a. review of 200 native and allograft liver biopsies;
b. the appropriate use of ultrasound localized, laparoscopy guided and transjugular liver biopsies.

5.35 Fellows must have formal didactic instruction in:

a. the pathogenesis, manifestations, and complications of end-stage liver disease and hepatic transplantation, including the behavioral adjustments of patients to their problems.

5.36 The program must incorporate a multidisciplinary team to approach issues in donor selection and evaluation, and in recipient criteria.