



Structure of an Accredited Training Program

Structure of Program:

The objective of a Transplant Surgery Fellowship Training Program can best be achieved when it is based within an institution approved for graduate medical education in General Surgery or Urology and also in those other disciplines particularly related to transplantation, such as Infectious Disease, Immunology, Radiology, Nephrology, Diabetology, Cardiology, Pulmonology, and Gastroenterology. To provide for an effective training program, the Transplant Surgery Section should be organized within the framework of a larger administrative unit, such as a Department of Surgery, General Surgery, or Urology. It is essential that the clinical component be centralized if a proper transplant surgery fellowship program is to be conducted. This can be best achieved by establishment of a unit to which all transplant cases are admitted. This should be under the direction of a qualified transplant surgeon with continuous responsibility for teaching, quality of patient care, and research. The director of the program should be certified by the American Board of Surgery or the American Board of Urology. Other staff members should be experienced in transplant surgery, dedicated to teaching, willing to devote the necessary time and effort to the education program, and should be engaged in research activities as well.

Scope of Training:

The program must provide instruction in the clinical and basic sciences, encompassing anatomy, physiology, pathology, and immunology including histocompatibility testing, as they relate to the diagnosis and treatment of end-stage organ diseases. Case material in sufficient volume must be available for the development of skill in the management of patients requiring transplantation. To qualify for accreditation by the ASTS, a transplant surgery fellowship program must have 75 patients available for each transplant fellow to serve as the principal surgeon over the course of their training. Sufficient volume of case material is defined as the program doing, on an annual basis, 60 kidney transplants and 18 Living Donor Nephrectomy cases, 50 liver transplants, 10 pancreas transplants, 10 intestine transplants, 50 hepatobiliary surgeries, and 75 hepatopancreatobiliary surgeries. Adequate facilities must also be available for instructing the trainee in the performance and interpretation of special diagnostic techniques and instrumentations necessary for the management of transplant patients. Most importantly, the candidate must be provided with an adequate volume of operative experience.

Surgical Content and Duration of Training for Fellows:

The activity of the training program must be sufficient to insure adequate exposure to the surgical procedures applied to transplantation. To receive a certificate of completion of an ASTS approved fellowship training program there are two separate requirements. First, the Program must be accredited for the particular organ (kidney, liver, pancreas, intestine, hepatobiliary, hepatopancreatobiliary) and the fellow must perform a minimum number of transplants for each accredited organ. The fellow must complete at least 40 kidney transplants, 12 Living Donor Nephrectomies, 45 liver transplants, 10 pancreas transplants (as well as 10 pancreas back-table preparations and 10 pancreas procurements),



10 intestine transplants, 35 Hepatobiliary cases, and 50 Hepatopancreatobiliary cases over the course of the fellowship in order to receive a certificate of completion. In addition, sufficient activity in multi-organ procurement is required such that the transplant center exists within organ procurement organization boundaries that can account for at least 25 multi-organ procurements annually.

The program must also be of sufficient duration to allow the trainee to acquire skill in the pre- and postoperative management of transplant patients. The length of the fellowship period should be no less than 24 months.

Clinical Material:

The clinical experience must be obtained after completion of the candidate's general surgery residency. It is essential for trainees to learn the management of end-stage organ disease and the specific indications and contraindications for organ transplantation. It is also important for the trainee to gain understanding of the function of the histocompatibility laboratory with respect to cross-matching techniques, PRA testing, and tissue typing. Actual time spent in the histocompatibility laboratory is considered desirable.

The trainee must obtain operative experience under the supervision of the Director of the Transplant Program or his/her deputy. An adequate volume of surgical experience must include: living related and/or deceased donor operations, transplantation procedures including re-operations and management of complications, and, for fellowships in kidney transplantation, vascular access procedures. The number of transplant operations performed by the candidate as primary surgeon, over the 24-month fellowship, must be no less than 40 kidney transplants and 12 Living Donor Nephrectomy cases in a kidney transplant fellowship, 45 liver transplants in a liver transplant fellowship, 10 pancreas transplants in a pancreas transplant fellowship, 10 intestine transplants in an intestine transplant fellowship, 35 hepatobiliary cases in a HB training fellowship, and 55 hepatopancreatobiliary cases in an HPB training fellowship.

It is essential that the trainee also have an intimate acquaintance with the laboratory and radiologic procedures used in the diagnosis of rejection, infection, and other problems. The trainee should also gain familiarity with the pathology of rejection, infection, and other problems. The fellow must also gain experience in the workup of living donors and in the procurement and preservation of organs obtained from deceased donors. The trainee must also have continuity of experience in the postoperative and long-term follow-up of transplant recipients. Finally, opportunities for participation in basic science research or clinical research are strongly encouraged.