

Supervisory Lines of Responsibility

The care of the individual patient in the Thoracic Surgery Residency Program is a group effort. The ultimate responsibility for care, decisions, procedures, etc., resides with the attending surgeon. The attending surgeon delegates aspects of the provision of care to the surgical residents on his/her service in proportion to the individual resident's level of training and expertise. Attending faculty members will encourage and be open and receptive to calls from residents regarding patient care issues. The Attending Surgeons will state this explicitly at the beginning of each resident rotation and this practice will be supported by the actions of all faculty members. The hierarchical system as a rule pertains (attending, chief resident, junior resident, General Surgery PGYII, intern) with graded levels of responsibility, supervision, guidance, communication, and accountability. When attendings or residents are away, off, or unavailable, specific attending and resident coverage arrangements will be communicated by the call duty roster and verbally. While the attending may interact with any particular resident, communication and interaction among all members of the team are expected and normative. Documentation of supervision in the medical record is expected and encouraged.

GOALS AND OBJECTIVES FOR R1 RESIDENTS ON THE CARDIOTHORACIC SURGICAL SERVICE

General Surgery Residents on the Thoracic and Cardiovascular Surgical Service should, in general, learn normal cardiovascular physiology and the basic principles of managing postoperative hemodynamics.

PGY1 house officers are expected to understand the surgical approaches to adult valvular heart disease, coronary artery disease and its complications, and clinical aspects of thoracic neoplasms (lung and esophagus).

Learning objectives :

- basic cardiovascular anatomy and physiology
- hemodynamic monitoring options
- pharmacology of inotropic drugs and clinical applications
- pharmacology of antiplatelet agents, antithrombotics, anticoagulants
- coagulation pathways
- mechanical support of the failing heart
- diagnosis atrial and ventricular arrhythmias
- theory/techniques of mechanical ventilation

Skills:

- care and placement of intravascular catheters
- management of intravascular volume
- basic and aggressive cardiopulmonary resuscitation techniques
- diagnosis and management of coagulopathies
- intricacies of therapeutic anticoagulation
- management of atrial and ventricular arrhythmias
- use of pacemakers for rhythm control and for diagnosis of arrhythmias
- mechanical ventilation and weaning protocols, bronchospasm treatment
- interpretation of chest x-rays, CT and PET scans
- pleural space management including thoracentesis and chest tubes
- unique and critical differences in the management of postoperative lung resection patients
- diagnosis and basic management of acute aortic emergencies
- participate in interactions with patients and their families
- team management in the provision of holistic care
- efficient fact and result finding using information technology
- protocol-driven approaches to patient care

According to interest, availability and skills it is hoped that participation in surgery will occur. Each resident should appreciate intraoperative decision making and the spectrum of techniques used in cardiovascular and thoracic surgery. Skills may include making standard incisions, wound closure, exploration of the chest during thoractomy, chest tube placement, thoracentesis, insertion/removal of the intra-aortic balloon pump, tracheostomy, internal jugular and subclavian line placements, wound care and debridement, etc.

GOALS AND OBJECTIVES FOR R2 RESIDENTS ON THE CARDIOTHORACIC SURGICAL SERVICE

The second-year General Surgery resident will refine each of the listed R1 skills, and strive to develop independent management, leadership, and teaching skills. Direct interactions with CT Surgery Staff are increased. Independent night call will be taken. Through patient care rounds and involvement with consults will demonstrate maturation in clinical judgment and a growing knowledge base to CT Surgery Staff and Fellows. Interactions with residents and Staff of other services will increase, with hopes of developing effective interpersonal skills and appreciation for the diverse contributions of others within the health care system.

It is expected that the R2 will be competent in independent care of straightforward pneumothorax, pleural effusions and vascular access challenges. Facility with bronchoscopy, tracheostomy, PEG and jejunostomy tubes and basic operative skills will be assessed by CT Surgery Staff and Fellows. While oversight of patients in the intensive care unit remains important, it is hoped that the R2 will make time to participate in major operative cases, especially those for congenital heart disease and adult general thoracic surgery pathologies.

Fellow Responsibilities

Preoperative and postoperative assessment in Pediatric Cardiac Surgery exists at both the inpatient and outpatient levels. The first year resident is assigned to 12 pre and postoperative clinics with Dr. John Myers. Preoperative clinic is held every Thursday following the Pediatric Preoperative conference where imaging studies including echocardiography, cardiac catheterization and angiography, and magnetic resonance imaging studies are presented in concert with the clinical overview of preoperative patients including those undergoing interventions by the Pediatric Cardiologists. The first year resident is assigned to 12 weeks of preoperative conference and clinic, as well as, 12 weeks of postoperative clinics which are held on Wednesdays. This also allows the resident to participate in postoperative rounds with Dr. Myers on Wednesdays to follow patients particularly those the resident has seen preoperatively and participated in operative care. In patient congenital heart patients requiring urgent or emergency operations, these are reviewed along with their studies prior to operation. This allows for a total of 3 months exposure to pediatric cardiac surgery on an outpatient basis. Assignment to two days per week the pediatric surgical operating room until ABTS requirements are reached during the first year are also afforded for intraoperative care and postoperative follow-up care of those patients operated on. Recording in New Innovations tracks the outpatient experience.

During the first year, the general thoracic surgical portion provides assignment to every other week General Thoracic Surgery clinic, with Dr. David Campbell, who is our senior faculty extremely active in this area. The resident fields questions from patients and the experience allows independent review of materials, physical examination and interviewing followed by case presentation to the attending. In this setting professionalism along with interpersonal skills and completeness of the examination, are evaluated. Following resident assessment, the staff surgeon corroborates findings. Appropriate ultrasound, pulmonary function and esophageal function testing, along with x-rays, CT scans, MRIs and PET scans are reviewed. The resident is then expected to participate in surgery necessary for preoperative patient seen. Postoperative visits occur in the same clinic, therefore, there is ample opportunity for follow-up wound inspections and assessment of the postoperative recovery and rehabilitation. By recording attendance and experiences within New Innovations, this is able to be tracked. In patient experience occurs for those patients transferred with emergent or urgent problems

and a thorough discussion and review of diagnostic examinations is carried out with the attending physician after resident examination for preoperative and nonoperative management planning. This will allow for the first year resident to, therefore, obtain operative experience on an elective fashion at least two days per week. With the clinic exposure is also a weekly Thoracic conference which occurs on Thursdays. A large majority of the more difficult and interesting cases are presented along with their imaging and planning in a multidisciplinary fashion. Attendance is required and recorded. Postoperative in hospital care for the thoracic surgical patients is largely rendered in concert within the context of the intensive care unit and intermediate care in concert with the attending physician and intensivists. Daily rounds are made with a plan of care formulated prior to staff involvement then discussed, modified and carried out. The work and teaching rounds are carried out on a daily basis. Imaging studies are reviewed and are part of the daily routine. Personal interactions between the residents and attending staff is the core of our teaching during this and all years of our program.

Adult cardiac surgery is largely the purview of the Chief Resident. The Chief assumes overall responsibility for the adult service. He is assigned to every other week, pre and postoperative clinics with a senior attending where elective surgical patients are seen, their imaging studies including echos, MRIs, CT scans, cardiac catheterization data and angiography are reviewed. A similar template to the experience in the thoracic surgical clinic is carried out since pre and postoperative patients are seen. Postoperative visits occur in the same clinic, therefore, there is ample opportunity for follow-up wound inspections and assessment of the postoperative recovery and rehabilitation. Once again, the experience is assigned, mandatory, and recorded within the New Innovations Residency Suite Management. Daily work and teaching rounds are held and urgent and emergent consults seen and evaluated and managed in concert with the staff attending. This allows for preoperative planning and postoperative follow-up care both throughout the hospitalization on a daily basis.