**Updated:** December 1, 2009

**Rotation:** Olive View General Surgery Rotation

**Rotation Director:** Melinda Maggard Gibbons

**Site:** Olive View – UCLA Medical Center

**Goals:** To provide trainees an opportunity to participate in the perioperative and operative care of general surgery patients.

**Level of Trainee:** R5

**Assessment:** Monitoring accomplishment of the stated objectives will be performed using the following methods:

1. **Global Rating:** end of rotation evaluation of resident performance to assess the resident’s demonstration of Core Competencies with respect to the stated objectives by faculty, other team resident members, students, and nursing staff.
2. **Case Logs:** auditing of operative cases pertinent to the specialty in the Surgical Operative Log.
3. **Written Examination:** performance on the annual ABSITE examination, Cardiovascular and Respiratory systems section.
4. **Patient Survey:** performance will be assessed by patient surveys administered though the rotation.

**Description of Rotation:**
The general surgery rotation of 3 months in the R2, 4 in R3, and 3 in the R5 years.

1. All rotating will be part of the general surgery team and responsible for the care of the general surgery and vascular surgery patients.
2. Residents will provide in-patient care including routine admissions, emergency room evaluations/admissions, and critical care of patients. They will also provide outpatient clinic consultations and postoperative care.
3. Residents will participate in surgical operations for these patients under supervision by the surgical faculty.
4. Residents will participate in all Department of Surgery educational conferences, Mortality and Morbidity conferences, Tumor Board, Multidisciplinary Breast Conference, and didactic presentations.
5. Residents are expected to actively participate and present at the weekly Multidisciplinary Surgery Conference.

**R3 Resident**

**Competency Based Learning Objectives**

**Patient Care:**

1. Perform a complete and thorough history and physical examination, with emphasis in elements unique to general surgery patients.
2. Initiate the laboratory evaluation and any other diagnostic studies with an understanding of the purpose of the tests ordered.
3. Make informed decisions about diagnostic and therapeutic interventions on general surgery patients with the guidance of faculty.
4. Be proficient in the preoperative preparation and routine postoperative care of the general surgery patients.
5. Understand basic pathophysiology of general surgery disease and master the skills necessary to care for the ICU patient under the guidance of faculty members.
6. Understand the basic indications for common radiological and interventional studies used in the care of GI surgery patients such as plain films, CT scans, and contrast studies.
7. Demonstrate the ability to effectively set priorities and coordinate the care of general patients.
8. Oversee and teach the junior residents on the surgical service.

**Medical Knowledge:**

**Abdominal Surgery**

1. Describe the embryological development of the peritoneal cavity and the positioning of the abdominal viscera.
2. Diagram the anatomy of the abdomen including its viscera and anatomic spaces:
   a. Musculoskeletal envelope, lesser sac, subphrenic spaces, Morrison’s pouch, foramen of Winslow, Pouch of Douglas, lateral gutters, contents of retroperitoneum, lymphatic drainage
3. Explain absorption and secretory functions of the peritoneal surfaces and the diaphragm.
4. Describe the anatomy of the omentum and its role in responding to inflammatory processes.
5. Assess the following signs associated with the acute abdomen and describe their pathophysiology:
   a. Rebound, guarding, rigidity, referred pain
6. Specify characteristics of the history, physical examination findings, and mechanism of visceral and somatic pain for the following processes:
   a. Acute appendicitis, bowel obstruction, biliary colic, ureteral colic, diffuse peritonitis and perforated ulcer
7. Explain the mechanism of referred pain in:
   a. Ruptured spleen, renal colic, biliary colic, basilar pneumonia, inguinal hernia
8. Discuss the following causes of paralytic ileus:
   a. Postoperative electrolyte imbalance, retroperitoneal pathology, extraperitoneal pathology (CNS, lung)
9. Illustrate use of the following diagnostic studies in the work-up of each process in #6:
   a. Lab tests and imaging (plain films, CT, MRI, ultrasound, biliary, GI contrast studies)
10. When considering the possibility of wound complications:
    a. What are the risk factors for abdominal wounds?
    b. What are contributing factors for wound dehiscence?
    c. What are the clinical presentations and timing for such presentations?
    d. What is the incidence of wound infections for biliary, colon, and upper GI tract?
11. Describe common etiology of the following abscess locations. Differentiate between the conditions favorable for percutaneous versus operative drainage for each of the abscess locations. Describe the safest and most effective approach using each technique:
   a. Right subphrenic, left subphrenic, subhepatic, right pericolic, left pericolic, pelvic, and perirectal
12. Explain the formation of fistulas in each of the following disease processes or factors:
   a. Operative complication, cancer, inflammatory bowel disease, foreign body, pancreatitis
13. Explain the role of a fistulogram in the diagnosis of intra-abdominal fistulas and abscesses.
14. List the factors that prevent healing of a fistula.
15. Summarize the conditions favoring operative versus non-operative treatment for fistulas listed in #12.
16. Describe the anatomy, clinical presentation, and complications of non-operative management for these hernias:
   a. Inguinal (direct and indirect), femoral, obturator, paraesophageal, sliding hiatal, ventral, umbilical, spigelian, paraduodenal, paraesophageal, Richter’s, lumbar and Petit, and diaphragmatic [traumatic, posterolateral (Bochdalek), and anterior (Morgagni)]
17. Define a sliding hernia and describe its repair.
18. Differentiate between incarceration and strangulation.
19. Outline the uses of prosthetic material and management of infection for incisional or recurrent hernias involving prosthetic material.
20. Explain the operative approaches for each of the following, including laparoscopic:
   a. Abdominal cavity: biliary tract, spleen, small bowel, large bowel, and pelvis
   b. Retroperitoneal organs: pancreas, adrenal glands, abdominal aorta
21. Describe the use and method of placement of retention sutures.

Alimentary Tract
1. Review the anatomy and embryology of the gastrointestinal (GI) tract with emphasis on systemic blood supply, portal venous drainage, neural-endocrine axis, and lymphatic drainage.
2. Review the nutritional needs of surgical patients.
3. Discuss the principles of intestinal healing:
   a. Normal GI tissue integrity and strength and how this relates to anastomotic healing.
   b. Effects of suturing and stapling techniques of the gut.
4. Discuss diseases of the esophagus to include:
   a. Motility disorders, inflammatory, injuries, reflux, diverticular disorder, and tumors (benign and malignant)
5. Summarize current medical management and its potential limitations; explain the role of surgical intervention when management fails in the following:
   a. Gastroesophageal reflux, peptic ulcer, gastroparesis, esophageal varices, inflammatory bowel disease, diverticulitis, lower GI bleeding.

Liver, Biliary Tract, and Pancreas
Demonstrate knowledge of the anatomy, physiology, and pathophysiology of the liver, biliary tract, and pancreas. Demonstrate the ability to manage disease of the liver, biliary tract, and pancreas amenable to surgical intervention.
1. Outline the work-up and differential diagnosis of the jaundiced patient.
2. Discuss the principal characteristics of and the treatment for the following:
   a. Gallstone pancreatitis, alcoholic pancreatitis, acute cholecystitis, acalculus cholecystitis, symptomatic gallstones, cholangitis, biliary dyskinesia
3. Discuss the diagnosis, evaluation, and management of acute pancreatitis including the role of peritoneal lavage, exploration, and complications such as adult respiratory distress syndrome, hypovolemia, abscess, sterile pancreatic necrosis and infected pancreatic necrosis.
4. Discuss presentation, evaluation, and management of pancreatic pseudocysts with attention to:
   a. Complications of pseudocysts (hemorrhage, infection, rupture)
   b. Percutaneous versus surgical drainage
   c. Indications for external versus internal drainage
   d. Choice of internal drainage procedure
5. Explain the diagnosis and management of pancreatic ascites.
6. Analyze alternatives to surgery in the management of gallstones, such as
   a. Oral dissolution with ursodeoxycholic acid
   b. Extracorporeal shock wave lithotripsy
   c. Endoscopic sphincterotomy
8. Assess management alternatives for common bile duct stones including open versus laparoscopic common bile duct exploration and ERCP.
9. Summarize the common sequelae of chronic pancreatitis to include pain, fat malabsorption, and diabetes.
10. Describe the anatomy of the pancreas, including regional vascular anatomy.
11. Describe the diagnosis and management of pancreas divisum.
12. Discuss the physiology of the pancreas, including endocrine and exocrine function and hormonal regulation.
13. Discuss the evaluation and management of carcinoma of the pancreas to include diagnostic evaluation using:
   a. CT, ultrasound, ERCP, biliary brushings, percutaneous biopsy, biliary drainage/stenting (percutaneous and internal)
   b. Resection, biliary bypass, biliary and gastrojejunostomy
14. Discuss diagnosis, evaluation, and surgical management of cystic neoplasms of the pancreas (mucinous and serous cystadenomas; cystadenocarcinoma).
15. Describe the diagnosis, evaluation, and surgical management of the following islet cell tumors of the pancreas including:
   a. Insulinoma, gastrinoma, somatostatinoma, glucagonoma, and VIPoma

**Minimally Invasive Surgery (MIS)**

Demonstrate an understanding of the applications and risks of minimally invasive surgery (MIS). Demonstrate an understanding of the technical and physiologic principles of minimally invasive surgical techniques. Develop specific technical skills and demonstrate proficiency in performance of basic laparoscopy, laparoscopic cholecystectomy, and other minimally invasive procedures.

1. Differentiate between conventional open and scope-assisted surgery, including:
   a. Anesthetic considerations and cardiovascular effects.
2. Discuss the physical limitations imposed on the user participating in minimally invasive surgery, including:
   a. Two-dimensional view.
b. Visual limitations of scope and monitoring equipment.
   c. Importance of patient position and cannula position for optimum exposure.

3. Explain the concept of the learning curve, and discuss the need for quality control in the education and evaluation of surgical housestaff in developing proficiency in MIS.

4. Explain the mechanics and principles for safe and effective use of the following equipment/procedures:
   a. Cautery (monopolar and bipolar)
   b. Ultrasonic shears
   c. Laser
   d. Telescopic direction (straight and angled laparoscope)
   e. Insulation technique and hazards
   f. Maintaining visualization of operative field

5. Discuss appropriate anesthetic management for MIS techniques involving abdomen and thorax.

6. Discuss techniques for gaining access to the abdomen, including Veress needle, open (Hassan cannula), direct visualization trocars.

7. Discuss recognition and management of complications, including major vascular injury, massive carbon dioxide embolus, or visceral injury.

8. List contraindications for laparoscopic surgery, and be able to explain why these conditions are considered relative or absolute contraindications.

9. Discuss the indications and contraindications for laparoscopic cholecystectomy.

10. Describe the technical aspects of preparing for and operating on a patient undergoing laparoscopic cholecystectomy (LC).

11. Identify major considerations for the decisions involved in converting from laparoscopic to open cholecystectomy, including:
   a. Difficulty identifying anatomy (i.e., common duct)
   b. Poor visibility
   a. Hemorrhage
   b. Common bile duct stone management (not amendable to laparoscopic or ERCP removal)

12. Select management options for handling bile duct injuries, including immediate and delayed diagnosis and treatment.

13. Specify the indications and technique for Percutaneous cholangiography, endoscopic ultrasound, and common bile duct exploration (CBDE), including use of choledochoscopy.

14. Discuss management of the patient with common duct stones, including:
   a. Choice of approach (open common duct exploration, versus laparoscopic CBDE, versus LC followed by/preceded by endoscopic stone extraction)
   b. Timing of surgery
   c. Safety and cost-effectiveness of each

Practice Based Learning:
1. Develop a personal program of self-study and professional growth with guidance from the teaching staff and senior residents. An understanding of the etiology, pathogenesis, pathophysiology, diagnosis and management of gastrointestinal disorders will allow for sound surgical judgment, which relies on knowledge, rational thinking and the surgical literature.

2. Utilize current literature resources to obtain up-to-date information in the general surgery patients and practice evidence-based medicine.

3. Participate in teaching and organization of the educational weekly Surgery Conference.
4. Participate in activities of the Department of Surgery (including all teaching conferences) and assume responsibility for teaching and supervision of subordinate surgical house staff, and medical students.
5. Participate and present at the Department Morbidity & Mortality conference and utilize information to further improve patient care.
6. Participate in daily teaching rounds and present patients in an organized and complete fashion.

**Professionalism:**
1. Practice compassionate patient care maintaining the highest moral and ethical values with a professional attitude.
2. Demonstrate understanding of the needs and feelings of others, including the patient’s family members, allied health care personnel (nurses, clerical staff, etc.), fellow residents, and medical students.
3. Communicate and collaborate effectively in a team of health care providers.
4. Demonstrate respect, compassion and integrity in the care of patients on a daily basis.
5. Demonstrate mature and educated approach to ethical issues commonly encountered in a general surgery.
6. Show sensitivity to patients’ culture, age, gender and disabilities.
7. Recognize and appropriately handle sensitive cases of abuse.
8. Be self-aware and have knowledge of professional limits by practicing on-going medical education and self-improvement.
9. Be accountable to the profession in their actions and decisions.

**Interpersonal Relationships And Communication:**
1. Create and sustain a therapeutic and ethically sound relationship with patients and patient families.
2. Work effectively with other members of the medical team including allied health care personnel (nurses, clerical staff, etc.), fellow residents, and medical students.
3. Maintain professional interactions with other health care providers and hospital staff.

**Systems Based Practice:**
1. Understand how the health care organization affects surgical practice of general surgery.
2. Demonstrate cost effective health care.
3. Be able to coordinate multi-specialty and multidisciplinary general surgery practice including discharge planning, social service, rehabilitation, and long term care.
4. Follow established practices, procedures, and policies of the Department of Surgery and integrated and affiliated hospitals.
5. Maintain complete of medical records, operative notes, patient database cards and other patient care related documentation in a timely, accurate and succinct manner.

**Typical week:**
2-3 clinics; no in-house call, 2 operative days, and 5-6 teaching conferences (including UCLA based conferences).