LOYOLA UNIVERSITY MEDICAL CENTER
RESIDENCY PROGRAM IN GENERAL SURGERY
CLINICAL ROTATION DESCRIPTION

Loyola University Medical Center
Department of Surgery — General Surgery

RESIDENT COMPLEMENT: PG1, PG3 & PG5

ROTATION DURATION:
PG1 – 1 month
PG3 & 5 – 2 months

GOALS (General Competencies - ACGME):
1. **Patient Care** that is compassionate, appropriate, and effective for the treatment of health programs and the promotion of health.
2. **Medical Knowledge** about established and evolving biomedical, clinical, and cognate sciences, as well as the application of this knowledge to patient care.
3. **Practice-based learning and improvement** that involves the investigation of care for their patients, the appraisal and assimilation of scientific evidence, and improvements in patient care.
4. **Interpersonal and communication skills** that result in the effective exchange of information and collaboration with patients, their families, and other health professionals.
5. **Professionalism**, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to patients of diverse backgrounds.
6. **Systems-based practice**, as manifested by actions that demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.

ROTATION-SPECIFIC GOALS:
**GOAL #1: Patient Care**
*By the end of this rotation, the PG1 resident is expected to be able to:*
- Perform and record complete H&P; construct differential diagnosis
- Evaluate soft tissue and post-op wounds
- Record clinical and operative observations
- Make pathological correlations
- With assistance, interpret diagnostic laboratory and imaging studies
- Select diagnostic studies to evaluate general surgery patients and describe findings
- Begin management of post-op wounds
- With supervision, insert intestinal tubes, and manage wound drains and stomas
- Perform nutritional assessments of surgical patients
- Provide follow-up care and initial assessment to patients in outpatient clinic or office.
- Demonstrate proficiency in suturing technique
- Assist with and begin to perform repair of abdominal wall hernias
- Assist with abdominal/cervical incision closure;
- Assist during abdominal, cervical and other operations
- Perform with assistance I&D of superficial abscesses, excision of skin and subcutaneous lesions
- With supervision, insert peripheral and central venous lines, perform tube thoracostomy, thoracentesis, nasotracheal and orotracheal intubation, and cardiovascular monitoring
• With assistance, perform endoscopic procedures (bronchoscopy, esophagoscopy, anoscopy) and tracheostomy,
• Learn to adequately assess and describe stoma findings and perianal findings in both outpts and inpts.

PG3 - *(the PG3 resident will be proficient in all PG1 Patient Care objectives)*

*By the end of this rotation, the PG3 resident is expected to be able to:*

• Record clinical and operative observations
• Make pathological correlations
• Interpret diagnostic studies assisted by chief resident, attending surgeons, and consultants
• Provide follow-up care to patients in outpatient clinic or office.
• Perform initial surgical consultation for inpatients and develop differential diagnosis
• Perform the initial steps of thyroid and parathyroid procedures such as patient positioning and marking, skin incision and raising subplatysmal flaps, opening strap muscles, close strap muscles, platysma, and skin.
• Assist during major abdominal and other operations
• Select and interpret appropriate pre- and post-operative diagnostic studies.
• Perform a fine needle aspiration biopsy of a thyroid nodule
• Prepare operative plans and document in progress notes
• Manage psychosocial aspects of surgical disease and utilize appropriate social agencies
• Treat medical conditions associated with critical illness; manage cardiac arrhythmias
• Assist attending surgeon with digestive tract operations, create ostomies
• Open and close abdominal incisions of all kinds
• Perform basic diagnostic laparoscopy with biopsy.
• Perform right hemicolectomy and common anorectal procedures
• Discuss end of life issues with terminal patients and families
• Understand and explain the prognosis and treatment related to staging of endocrine and colorectal malignancies
• Identify adrenal anatomy, blood supply, and surrounding structures at the time of adrenalectomy or other operation.
• Demonstrate operative exposure (open or laparoscopic; human, cadaver, or animal) of either adrenal gland.
• Demonstrate in a cadaver or the operating room typical locations for ectopic parathyroid glands.
• Describe the technique of cryopreservation and its role in the treatment of patients with multigland disease or during reoperative parathyroid surgery
• Outline the interpretation of intraoperative PTH monitoring results and their correlation with postoperative eucalcemia

PG5 - *(the PG5 resident will be proficient in all PG 3 & 1 Patient Care objectives)*

*By the end of this rotation, the PG5 resident is expected to be able to:*

• Make recommendations pertinent to inpatient and outpatient consultations for diagnosis and treatment plans
• Demonstrate proficiency in all aspects of patient care, especially cancer patient management
• Stage specific neoplasms clinically and pathologically using the TNM system
• Prepare patients medically for cancer surgery; optimize nutritional and metabolic deficits
• Assess need and institute appropriate monitoring both pre- and post-operatively.
• Use appropriate support from pharmacologic agents
• Select and interpret appropriate pre- and post-operative diagnostic studies.
• Treat wound complications (infections, dehiscence, evisceration)
• Assist and supervise junior residents in diagnosis, surgical management, and follow-up care of patients with digestive surgical diseases
• Prepare operative plan for treatment of malignant disease.
• Manage psychosocial aspects of neoplastic disease.
• Direct appropriate utilization of social agencies in complex patient management
• Participate in departmental meetings and prepare evaluations of junior residents and students
• Treat problems associated with critical illness; direct complex ventilator-dependent patient management; manage cardiac arrhythmias
• Open and close abdominal incisions of all kinds
• Assist with and perform selected thoraco-abdominal and retroperitoneal exposures to access kidneys and great vessels
• Supervise performance of laparotomy for uncomplicated acute abdominal conditions (e.g., acute appendicitis, small bowel obstruction, perforated peptic ulcer), assist junior residents to perform these uncomplicated procedures
• Perform complex laparotomy for diffuse peritonitis in septic patient
• Perform complex and remedial hernia repair procedures, assist junior residents with repair of uncomplicated inguinal and umbilical hernias
• Perform gastro-intestinal, ano-rectal, pancreatic, and biliary operations, create ostomies
• Perform appropriate re-operative laparotomy for a variety of gastrointestinal problems
• Perform colostomies, colostomy closures, and bowel anastomoses of all types
• Supervise performance of basic laparoscopic operations (cholecystectomy with cholangiography)
• Perform advanced laparoscopic operations (ventral hernia repair, Nissen fundoplication, adrenalectomy, splenectomy, etc.)
• Understand indications for colonoscopy both as a screening, surveillance, and diagnostic tool and become proficient in the performance of the endoscopy
• Recognize colorectal surgery emergencies such as: large bowel obstruction, perforation, lower GI bleeding, non-reducible prolapse, gangrenous or incarcerated hemorrhoids, perianal abscesses, and emergent postoperative complications (anastomotic leak, wound dehiscence).

Patient Care will be assessed and measured by:
• Direct observation on rounds, in the Operating Room, in multidisciplinary conferences (for patient care presentations) and in clinics
• Service Chief and faculty surgeon summary (global) evaluations of clinical performance
• A 360-degree evaluation (students, faculty, nurses, other health care providers and workers) from key geographic locations.

GOAL #2: Medical Knowledge
By the end of this rotation, the PG1 resident is expected to be able to:
• Understand anatomy, embryology, biochemistry and physiology of GI tract, enterohepatic circulation, nutritional needs of surgical patients, and bacterial flora in the upper/lower GI tract
• Describe anatomy of pancreas, including its vascular anatomy
• Discuss endocrine & exocrine function of pancreas
• Summarize nutritional requirements for cancer patients, and describe how they differ from those recommended for patient with benign disease
Describe indications for curative vs. palliative treatment
Develop an algorithm that includes pertinent history, examination findings, and initial diagnostic evaluation of primary and secondary, symptomatic and asymptomatic hyperparathyroidism.
Recognize and treat common complications of thyroid, adrenal and parathyroid surgery
Demonstrate normal parathyroid anatomy in a cadaver or in the operating room, including typical gland locations, blood supply, and relationship to the recurrent laryngeal nerves and other adjacent structures.
Describe normal parathyroid embryogenesis and descent. Describe how this affects ectopic gland location
Outline the normal calcium metabolic pathway including vitamin D metabolism, parathyroid hormone production and regulation, and calcitonin production and regulation.
Describe the impact of specific medications and medical conditions on serum calcium and calcium metabolism.
Describe the impact of aging on calcium metabolism.
Outline the evaluation and treatment of life-threatening hypercalcemia.
Describe thyroid anatomy and physiology
Describe normal variants in recurrent laryngeal nerve anatomy including frequency.
Describe normal thyroid embryogenesis and descent.
Outline the normal thyroid hormone synthetic pathway including iodine metabolism and feedback mechanisms.
Describe the impact of specific medications on the thyroid hormone synthetic pathway and thyroid function.
Describe the impact of aging on the thyroid hormone synthetic pathway and thyroid function.
Outline appropriate thyroid function testing for the following clinical scenarios, including interpretation of predicted test results: Thyroid nodule, Goiter, Hyperthyroidism & Hypothyroidism
Develop an algorithm that includes pertinent history, examination findings, and diagnostic evaluation of a palpable thyroid nodule and a nonpalpable nodule discovered on ultrasound performed for nonthyroid pathology
Understand anatomy of colon, rectum, and anus
Understand common outpatient anorectal problems like: fissure, fistula, abscess, hemorrhoids; develop and algorithm for workup of anal pain and rectal bleeding
Understand differences between Crohn’s disease and Ulcerative colitis and the indications for operation in these diseases.
Understand the various operations for colon cancers of different locations, how these cancers are staged and treated.
Understand common postoperative complications after colorectal surgery and how they are treated.

**PG 3 - (the PG3 resident will be proficient in all PG1 Patient Care objectives)**

**By the end of this rotation, the PG3 resident is expected to be able to:**
- Outline algorithms for the evaluation and treatment of differentiated thyroid cancer, medullary thyroid cancer, thyroid lymphoma, & anaplastic thyroid cancer
- Describe risk factors for well-differentiated thyroid cancer, medullary thyroid cancer, and anaplastic thyroid cancer.
- Outline algorithms for the evaluation and treatment of hyperthyroidism due to Graves’ disease, toxic nodule, medications, pregnancy.
• Describe the clinical presentation of thyroid storm and outline the treatment of thyroid storm.
• Outline an algorithm for the evaluation and management of nontoxic multinodular goiter, including substernal goiter with and without airway involvement.
• Outline the pathophysiology of multinodular goiter, Grave’s disease & thyroid cancer
• Describe operative approaches to thyroid pathology
• Outline the staging and prognosis in thyroid cancer
• Recognition and treatment of common postoperative complications such as hematoma, hypocalcemia, thyroid storm, & voice changes
• Outline the diagnostic pathway of ACTH dependent vs. ACTH independent Cushing’s syndrome, including the role of the low and high dose dexamethasone suppression test.
• Describe the localization studies available for adrenal tumors, including iodocholesterol scanning, CT scanning, MIBG, PET scanning, and MRI.
• Distinguish bilateral hyperplasia vs. unilateral disease in Cushing's syndrome and primary hyperaldosteronism.
• Describe the diagnostic algorithm for primary hyperaldosteronism.
• Describe the treatment and outcome for primary hyperaldosteronism in patients treated with adenoma vs. bilateral adrenal hyperplasia.
• Outline the diagnostic evaluation and treatment of adrenocortical carcinoma.
• Outline the diagnostic pathway for pheochromocytoma and review of the treatment modalities and recommendations.
• Describe the evaluation and treatment of an adrenal incidentaloma.
• Explain the etiology, diagnosis, and treatment of adrenal cystic disease.
• Explain the role of fine needle aspiration biopsy in the evaluation of adrenal tumors.
• Describe operative approaches for adrenal surgery, including the laparoscopic trans- and extraperitoneal approaches and anterior and posterior open approaches.
• Discuss the initial evaluation of patients with asymptomatic hyperparathyroidism being considered for observation. This should include an outline of the appropriate follow up of these patients including diagnostic evaluation, frequency of testing, and anticipated outcomes. Describe which patients are appropriate candidates for nonoperative management of hyperparathyroidism.
• Outline indications for and interpretation of results of bone density testing.
• Outline outpatient follow up after parathyroidectomy.
• Outline an algorithm for the preoperative localization of parathyroid adenoma in patients with primary hyperparathyroidism. Discuss the rationale and accuracy of the various localizing strategies and tests.
• Outline an algorithm for intraoperative confirmation of successful parathyroidectomy during full neck exploration and minimally invasive parathyroidectomy.
• Outline the prevention, recognition, and management of hungry bone syndrome after parathyroidectomy.
• Outline a diagnostic and treatment pathway for patients with non-MEN familial hyperparathyroidism
• Understand how to preoperatively work-up patients with colorectal cancer and how to survey them postoperatively
• Understand how to perform the following operative procedures: band ligation of hemorrhoids, hemorrhoidectomy, I&D of perianal abscesses, simple fistulotomy, anoscopy, proctoscopy, lateral internal sphincterotomy, operative treatment of anal condylomas and pilonidal disease
• Understanding of the risks related to procedures that involve the anal sphincter and be able to communicate this to the patient and options for managing fistula in ano

PG 5
(the PG5 Resident will be responsible for all PG 3 &1 knowledge objectives, plus the following)

By the end of this rotation, the PG5 resident is expected to be able to:

• Summarize potential limitations and explain role of remedial surgical intervention after repeated treatment failure of lower GI bleeding, inflammatory bowel disease, diverticulitis, intra-abdominal abscess.
• Assess alternatives to surgical intervention in managing complex alimentary tract diseases: short gut syndrome, intestinal polyps, inflammatory bowel disease.
• Summarize preoperative, operative, and post-operative management of complex alimentary tract diseases including: re-operative abdomen, high output GI fistulas, inflammatory bowel disease with strictures, pouches, ostomies, and perineal fistulas; recurrent colon malignancy, and carcinomatosis.
• Discuss diagnosis, evaluation, and surgical management of complex pancreatic neoplasms (cystic, islet cell, carcinoma, lymphoma)
• Discuss the surgical management of patients with multiple abdominal neoplasms and the methods used to prioritize treatment.
• Describe etiology, manifestations, and treatment of desmoid tumors, rectus sheath hematoma, retroperitoneal fibrosis
• Describe the operative choices for patients with metastatic colorectal cancer both curative and palliative
• Describe the pathophysiology and surgical treatment of rectal prolapse, fecal incontinence, constipation
• Describe congenital adrenal hyperplasia.
• Describe the surgical approaches to pheochromocytoma.
• Review all the surgical options/approaches for adrenalectomy and the indications for each.
• Describe the intraoperative management of patients with pheochromocytoma during surgery regarding anesthetic management, surgical technique, and pre and postoperative care.
• Identify the distinguishing characteristics of extraadrenal pheochromocytomas.
• Describe the evaluation and treatment of multiple endocrine neoplasia type 2 syndrome in a patient with adrenal lesions.
• Describe the treatment options for a patient with malignant pheochromocytoma.
• Identify the steps for a safe and successful right and left laparoscopic adrenalectomy.
• Describe the diagnosis and treatment of paragangliomas.
• Understand how to surgically approach colorectal cancer and laparoscopic vs open surgery for these cancers
• Understand how to atraumatically mobilize the splenic flexure
• Understand how to do a Total Mesorectal Excision
• Understand the steps to making and Ileal Pouch
• Understand anorectal anatomy with particular respect to occult perirectal abscesses including deep postanal space abscess

Medical and surgical knowledge will be assessed by:
• Daily queries on rounds and in the Operating Room
• American Board of Surgery In-Training Examination (ABSITE)
GOAL #3: Practice-based Learning & Improvement

By the end of this rotation, every resident (PGY 1-5) is expected to be able to:

- Present cases concisely and clearly to peers, supervising surgeons and consultants.
- Do not use unapproved abbreviations in the medical record.
- Utilize fully the Computerized Patient Record System (EPIC).
- Search, evaluate, and critically review scientific evidence appropriate to the care of assigned patients. Data will be presented on teaching rounds, in the Operating Room, while discussing indications for procedures or during the patient care review conferences.
- Include evidence based references in M&M presentations and on rounds.
- Use information technology to access clinical information, including performing on-line searches to support self-directed learning.

Practice based learning will be assessed and measured by:

- Identify at least one evidence based publication per type of operation performed by the resident during the rotation (PGY 1, 3, 5) and discuss the publication with the attending surgeon.
- Evaluate M&M presentations of PGY 3 and PGY 5 residents for clarity and quality. Feedback will be provided immediately and during their semi-annual resident evaluations feedback sessions.

GOAL #4 Interpersonal & Communication Skills

By the end of this rotation, every resident (PGY 1-5) is expected to be able to:

- Discuss planned procedure with patient defining course of treatment and potential complications.
- Present patients on teaching rounds and during patient care review conferences.
- Assist students to prepare for patient presentations on rounds.
- Present surgical complications at M&M (PGY 5).
- Serve as effective surgical team leader (PGY 5).

Communication skills will be assessed and measured by:

- Direct observation on rounds or in clinic. PGY 1 and PGY 5 residents will be observed discussing recommended treatment for several patients.
- Direct observation of patient presentations during patient care review, rounds and conferences.
- Evaluations by students on the service will be obtained regarding residents’ abilities to assist them with presentations, procedures and patient care management decisions.

GOAL #5 Professionalism

By the end of this rotation, every resident (PGY 1-5) is expected to be able to:

- Administer patient care conscientiously with highest standard of professional, ethical and moral conduct in all circumstances.
- Work with students, peers, superiors, nurses, health care professionals and other hospital staff colleagues in a courteous and thoughtful manner.

Professionalism will be assessed and measured by:

- Direct observation by attending surgeons of postoperative or post procedural care plans and instructions as outlined by the resident with the patient and/or family members (at least one
discussion per PGY1 and PGY5 resident will be evaluated and feedback provided immediately. This exercise will occur weekly during the rotation for each resident.

- A 360-degree evaluation system (students, peers, faculty, nurses, other health care providers) will be used to evaluate residents’ performances in all geographic locations and throughout the day and night.

**GOAL #6 Systems-based Practice**

*By the end of this rotation, every resident (PG1-5) is expected to be able to:*

- Understand the impact of surgical disease on an individual patient
- Identify needs of the patient as soon as possible (in clinic, on wards, in SICU, the Operating Room) to recruit assistance for the patient from appropriate sources (e.g. primary care, social services, pastoral support, hospice care, support groups, etc.).
- Teach junior residents and medical students.

Systems Based Practice will be assessed and measured by:

- A report of experience either in outpatient clinic, during a multidisciplinary planning conference, hospice or support group planning session that specifically addresses the role of surgeons
- A 360-degree evaluation (students, peers, faculty, nurses, other health care providers) will be used to evaluate residents’ performances in all geographic locations, and throughout the day and night.

**RECOMMENDED READING:**

- Surgery: Scientific Principles and Practice. Greenfield (most recent edition)
- Sabiston’s Textbook of Surgery (most recent edition)
- Current Therapy of Surgery – Cameron ed.(most recent edition)
- Selected Readings from the SCORE modules that deal with colorectal and endocrine subjects
- Distributed endocrine surgery and colorectal journal articles

**REQUIRED CONFERENCES and ROUNDS:**

A. Mortality and Morbidity
B. Residents’Conference
C. Grand Rounds
D. Friday Teaching Rounds
E. Every other Wednesday afternoon Medical/Surgical GI Conference
F. Saturday and Sunday rounds with on-call attending surgeon
G. Friday Afternoon Colorectal Case Conference

**FACULTY:**

Frederick Luchette, M.D. (Service Chief)
Vinod Winston, M.D.
Ajit K. Sachdeva, M.D. (American College of Surgeons)
Geoffrey Silver, M.D. (Chief, General Surgery Section)
John Santinello, M.D.
Adam Kabaker, M.D.
Dana Hayden, M.D.
Joseph Posluszny, M.D.