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

Loyola University Medical Center
Department of Surgery - Endocrine

RESIDENT COMPLEMENT: PG1

ROTATION DURATION: PG1 - 1 month

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 initial surgical consultation for inpatients and develop differential diagnosis
- With assistance, select and interpret appropriate pre- and post-operative diagnostic laboratory and imaging studies.
- Evaluate soft tissue and post-op wounds
- Record clinical and operative observations
- Make pathological correlations
- Begin management of post-op wounds
- With assistance, treat wound complications (infections, seromas, hematomas, dehiscence, etc.)
- Provide follow-up care and initial assessment to patients in outpatient clinic or office.
- Demonstrate proficiency in suturing technique
- Assist during neck/cervical, laparoscopic or other operations
- Perform with assistance I&D of superficial abscesses, excision of skin and subcutaneous lesions
- Assist with abdominal/cervical incision closure
- Assist during abdominal, cervical and other operations
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:*

**Parathyroid**
- Develop an algorithm that includes pertinent history, examination findings, and initial diagnostic evaluation of primary and secondary, tertiary, symptomatic and asymptomatic hyperparathyroidism.
- Recognize and treat common complications after thyroid, adrenal and parathyroid surgery
- Describe normal parathyroid anatomy 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.
- Outline the evaluation and treatment of life-threatening hypocalcemia and hypercalcemia.
- 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.

**Thyroid**
- 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.
• 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
• 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, and 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

Adrenal
• 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 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.

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)
• Oral Exams for PGY 1

GOAL #3: Practice-based Learning & Improvement
By the end of this rotation, resident (PGJ) 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 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 (PG1) and discuss the publication with the attending surgeon.

GOAL #4 Interpersonal & Communication Skills
By the end of this rotation, resident (PG1) 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

Communication skills will be assessed and measured by:
• Direct observation on rounds or in clinic. PGY1 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, resident (PG1) 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 resident will be evaluated and feedback provided immediately).
• 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, resident (PG1) 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 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 endocrine surgery subjects
Distributed journal articles and textbook reading assignments

REQUIRED CONFERENCES and ROUNDS:
A. Mortality and Morbidity
B. Residents' Conference
C. Grand Rounds
D. Friday Teaching Rounds

ENDOCRINE SURGERY SECTION:
Steven A. De Jong, M.D. (Service Chief)
Adam Kabaker, MD
Nadine Rinella, A.P.N.
LOYOLA UNIVERSITY MEDICAL CENTER
RESIDENCY PROGRAM IN GENERAL SURGERY
CLINICAL ROTATION DESCRIPTION

Loyola University Medical Center
Department of Surgery — Endocrine Surgery

RESIDENT COMPLEMENT:       PG2

ROTATION DURATION:          PG2 – 7 weeks

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.
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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 PG2 resident is expected to be able to:
- Perform and record complete H&P; construct differential diagnosis
- Perform initial surgical consultation for inpatients and develop differential diagnosis
- Select and interpret appropriate pre- and post-operative diagnostic laboratory and imaging studies.
- Prepare operative plans and document in progress notes
- Evaluate soft tissue and post-op wounds
- Record clinical and operative observations
- Make pathological correlations
- Begin management of post-op wounds
- Treat wound complications (infections, seromas, hematomas, dehiscence, etc.)
- Provide follow-up care and initial assessment to patients in outpatient clinic or office.
- Demonstrate proficiency in suturing technique
- Assist during neck/cervical, laparoscopic or other operations
- Perform with assistance I&D of superficial abscesses, excision of skin and subcutaneous lesions
- 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.
• Identify adrenal anatomy, blood supply, and surrounding structures at the time of adrenalectomy or other operation.
• Outline the interpretation of intraoperative PTH monitoring results and their correlation with postoperative serum calcium levels.

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
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Parathyroid
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• 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

Thyroid
• Describe thyroid anatomy and physiology
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• Describe normal thyroid embryogenesis and descent.
• Outline the normal thyroid hormone synthetic pathway including iodine metabolism and feedback mechanisms.
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• Describe risk factors for well-differentiated thyroid cancer, medullary thyroid cancer, and anaplastic thyroid cancer.
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• Describe the localization studies available for adrenal tumors, including 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.
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• 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.
• 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 as well as describe the treatment of these lesions.
• 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.

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)
• Oral Exams for PGY 1-5

GOAL #3: Practice-based Learning & Improvement
By the end of this rotation, the PG2 resident 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 and discuss the publication with the attending surgeon.
• Evaluate M&M presentations of PG2 resident 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 PG2 resident 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
• Serve as effective surgical team leader

Communication skills will be assessed and measured by:
• Direct observation on rounds or in clinic. PG2 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 PG2 resident 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 PG2 resident will be evaluated and feedback provided immediately).
- 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 PG2 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.
- Prepare and discuss evaluations of 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 endocrine surgery subjects
Distributed journal articles and textbook reading assignments

REQUIRED CONFERENCES and ROUNDS:
A. Mortality and Morbidity
B. Resident Conference
C. Grand Rounds
D. Friday Teaching Rounds
E. Saturday and Sunday rounds with on-call attending surgeon

ENDOCRINE SURGERY SECTION: