PLASTIC AND HAND SURGERY CORE OBJECTIVES

Through rotation on the plastic and hand surgery service, residents shall attain the following goals:

I. Patient Care

A. Preoperative Care: Residents will evaluate and develop a plan of care for preoperative patients with general surgical conditions. The plan shall include any interventions that will successfully prepare a patient for surgery.

1. Setting
   a. Out-patient clinic attendance
   b. Hospital consultation service

2. Evaluation:
   a. Obtain and interpret appropriate laboratory tests
   b. Obtain and interpret appropriate radiologic tests
   c. Assess cardiopulmonary suitability for surgery and obtain appropriate evaluations and testing and/or institute appropriate pharmacological preventive therapy
   d. Evaluate the need for preoperative nutritional therapy
   e. Participate in the informed consent process for patients being scheduled for an elective procedure or surgery
      i. PGY-1 (junior) residents shall participate in the informed consent process for simple procedures and operations, e.g. lesion excision, scar revision, tendon repair
      ii. PGY-3 (mid-level) residents shall participate in the informed consent process for simple and moderately complex procedures and operations, e.g. breast reconstruction, flaps for reconstruction, ORIF of fractures

B. Operative Care: Gain an experience in the performance of surgeries and plastic surgical procedures. PGY levels indicate the level of resident most appropriate to participate. This does not preclude a more senior or more junior resident from participating if there is no level appropriate resident available.

1. Common procedures as assistant of junior surgeon to the attending surgeon
a. Excision of skin and subcutaneous masses: lipoma, benign nevus, dermoid cyst, neurofibroma, benign warts (PGY-1)

b. Excision of malignant skin and subcutaneous lesions: melanoma, basal cell carcinoma, squamous cell carcinoma (PGY-3)

c. Excision of hidradenitis suppurativa (PGY-3)

d. Scar revisions: hypertrophic, keloid (PGY-1)

e. Repair of cleft lip and palate (PGY-3)

f. Repair of facial fractures: mandible, mid-face, orbital (PGY-3)

g. Repair of hand/wrist fractures (PGY-1&3)

h. Construction of flaps for coverage of wounds: TRAM, free flap, local/rotational, omental (PGY-3)

i. Abdominoplasty (PGY-1&3)

j. Breast reduction (PGY-3)

k. Breast augmentation (PGY-3)

l. Skin grafts (PGY-1)

m. Tendon releases: carpal tunnel, contracture (PGY-3)

n. Tendon repair (PGY-1&3)

o. Hand amputations and replantations (PGY-1&3)

p. Esthetic surgery: blepharoplasty, face lift, rhinoplasty, liposuction (PGY-1&3)

2. Dexterity: residents shall learn to display and perform the above operations with manual dexterity appropriate for their level

a. PGY-1 (junior) residents shall gain facility with operative techniques as assistants on their initial operative experiences with the expectation that they will be able to be a junior surgeon for low complexity procedures by the end of their 1st year

b. PGY-3 (mid-level) residents shall gain facility with techniques as assistants on their initial operative experiences for cases of moderate to high complexity with the expectation that they will be able to be a junior surgeon for moderately complex procedures by the end of their 3rd year
C. Postoperative Care: residents shall develop and follow through with a plan of care for the plastic surgical patient. This plan will include how to facilitate the recovery of patients undergoing abdominal wall, breast, hand, skin graft, facial and esthetic procedures.

1. Setting:
   a. Out-patient Surgery area
   b. Inpatient floor
   c. Out-patient clinic

2. Through evaluation of the postoperative patient, the resident shall be able to assess and manage:
   a. Pain management: evaluate patients for pain and the adequacy of their postoperative pain management regimen
      i. Evaluate the use and effectiveness per oral and intravenous pain medications
      ii. Evaluate the use and effectiveness of patient controlled anesthetic units
      iii. Evaluate the use and effectiveness of epidural anesthesia
   b. Wound care and healing
      i. Identify and treat infected wounds
      ii. Identify and treat wound seromas
      iii. Identify and treat wound dehiscence
      iv. Identify and treat grafts and flaps at risk
   c. Fluid and electrolyte abnormalities after surgery
   d. Use and care of surgical drains
   e. Identify infection: surgical site, blood, genitourinary, pulmonary, catheter-related, intraabdominal abscess, vascular anastomotic disruption
   f. Identify and treat cardiopulmonary complications: myocardial infarction, pulmonary edema, atelectasis, pulmonary embolism, pneumonia
   g. Identify and treatment of renal impairment/failure: pre-renal azotemia, acute renal failure, IV-dye associated renal impairment
h. Identify the need for parenteral nutrition and employ its use

i. Identify a patient’s readiness for discharge

j. Identify a patient’s need for rehabilitation or nursing home placement

k. Identify the need for consultation of another medical/surgical service

3. Resident expectation by level

a. PGY-1 (junior) residents shall gain an experience in how to recognize and differentiate the above problems and conditions and be able to formulate and institute a strategy of care with the assistance of more senior residents or staff

b. PGY-3 (mid-level) residents shall be able to recognize and differentiate the above problems and conditions and be able to formulate and institute a strategy of care with the help of staff when necessary

D. Emergent/Urgent Care: Residents will evaluate and manage emergent/urgent general surgical conditions

1. Setting

a. Outpatient clinic

b. Inpatient consult service

c. Emergency Department

2. Emergent/Urgent conditions: residents shall learn to recognize and manage

a. Hand infections: felon, pyogenic tenosynovitis, bite injuries

b. Hand and wrist fractures and amputations

c. Facial fractures: mandible, mid-face, orbital

d. Soft tissue infections: surgical site, hidradenitis suppurativa, IV site injuries/extravasations

d. Infected prosthesis: implants, spacers

3. Management

a. Evaluation: residents shall learn to evaluate patients with the above emergent conditions through history & physical examination and decide upon a plan of care including the need for further evolution by other specialties, laboratory testing, or
radiologic testing

i. PGY-1 (junior) residents shall gain an experience in how to recognize and differentiate

ii. PGY-3 (mid-level) residents shall be able to recognize and differentiate and shall learn to formulate a plan of care

b. Resuscitation: residents shall learn to identify the need for resuscitation of a patient with an emergent surgical condition including the need for optimization and monitoring of the patient in an ICU or “step-down” setting

i. PGY-1 (junior) residents shall gain an experience in how to recognize the appropriate setting of care

ii. PGY-3 (mid-level) residents shall be able to recognize and differentiate patients needing differing levels of care with the assistance of staff if necessary

c. Operation: residents shall learn to make a judgment, based upon their evaluation, whether a patient’s condition warrants urgent or emergent operative therapy. A judgment of what the appropriate operation to be performed should be made

i. PGY-1 (junior) residents shall gain an experience in how to recognize patients in need of urgent or emergent operative therapy

ii. PGY-3 (mid-level) residents shall be able to recognize and differentiate patients needing urgent or emergent operative therapy with the assistance of staff if necessary

d. Postoperative: residents shall learn to make a judgment of the appropriate postoperative disposition for patients with urgent/emergent surgical conditions

i. Critically ill – ICU

ii. Stable in need of further monitoring – “step-down” unit

iii. Stable – floor

iv. PGY-1 (junior) residents shall gain an experience in how to recognize and differentiate the level of care necessary for patients after an urgent or emergent operation

v. PGY-3 (mid-level) residents shall be able to recognize and differentiate the level of care necessary for patients after an urgent or emergent operation with
the assistance of staff if necessary

II. Medical Knowledge

A. Didactics: residents are expected to attend and participate in the weekly didactic sessions including the basic science course, case conference, M&M, Grand Rounds, and the Junior & Senior resident discussion sessions, as appropriate by level.

B. Residents are expected to attend Plastic Surgery Journal Club when held

C. It is expected that residents will educate themselves upon the scientific information relating to plastic surgery.

E. System function: residents shall gain an understanding of the anatomy, physiology, and function of organs and organ systems affected by plastic surgical conditions and operative procedures

   1. PGY-1 (junior) residents shall reacquaint themselves with the basic physiology and function of the organs and systems, and they shall learn how they are affected by plastic surgical conditions and operations

   2. PGY-3 (mid-level) residents shall be able to display and understanding of anatomy, physiology, and function of organs and organ systems affected by plastic surgical conditions and operative procedures

F. Disease process: residents shall become familiar with the various disease processes affecting the organ systems commonly seen in general surgical patients. The recommended texts by the department are Sabiston: Textbook of Surgery and O'Leary's The Physiologic Basis of Surgery. These texts should serve as a basis for reference as residents are encouraged to peruse other source more specific to Plastic Surgery. It is expected that residents on the Plastic Surgery Service will read about the various disease processes that they encounter in the clinic, on the wards and in the operating room.

G. Surgery

   1. Techniques: residents shall learn and become familiar with the various endoscopic and surgical techniques employed for the treatment of the various plastic surgical disease processes, as exampled in I.B.1(a-p)

   2. Residents shall learn the appropriateness of the application of surgical or endoscopic therapy

   3. Complications and management: residents shall gain an experience in recognizing and managing medical and surgical complications of procedures and therapies for and related to the procedures listed in I.B.1(a-p)
4. It is expected that resident shall prepare for the operating room by reading about the procedure to be done and therefore familiarizing themselves with the available and appropriate techniques to accomplish the surgical goal.

   a. PGY-1 (junior) residents shall gain an experience in how to recognize and differentiate potential complications of a procedure or operation

   b. PGY-3 (mid-level) residents shall be able to recognize and differentiate potential complications of a procedure or operation with the assistance of staff when necessary

5. Follow-up therapy: residents shall gain an understanding of the follow-up needed and recommended for various plastic surgical procedures

   a. Setting:

      i. Out-patient Surgery area: residents shall learn to assess the suitability of a patient for discharge after an outpatient procedure.

      ii. Inpatient floor: residents shall learn the appropriate intervals for follow-up of a patient discharged from the Plastic Surgery service depending upon disease process and the type of surgery or non-operative therapy performed.

      iii. Out-patient clinic: residents shall learn the follow-up intervals used to evaluate patients after various surgeries or nonoperative therapies.

6. Gain an understanding of the utility, appropriateness, and use of diagnostic modalities used in both the inpatient and outpatient settings for the evaluation of:

   a. Organ or organ system

      i. Abdominal wall

      ii. Breast

      iii. Skin and soft tissue

   b. Evaluation Modality

      i. Ultrasound

      ii. CT scan

      iii. MRI

      iv. Fine needle and core needle biopsy
a. PGY-1 (junior) residents shall gain an experience in how to recognize and differentiate the available options for an evaluation and be able to decide on the appropriate test for simple problems, e.g. biopsy of a suspicious nevus

b. PGY-3 (mid-level) residents shall be able to recognize and differentiate the available options for an evaluation and be able to decide on the appropriate test for simple problems without assistance and the evaluation of more complex problems with the assistance staff when necessary, e.g. identifying a suitable donor site for a free flap

III. Practice-based Learning

A. Residents are expected to critique their performance and their personal practice outcomes

1. Morbidity & Mortality Conference – Discussion should center on an evidence based discussion of complications and their avoidance.

2. Residents shall keep logs of their cases and track their operative proficiency as gauged by whether they assisted or were the surgeon junior or senior or teaching assistant

IV. Interpersonal and Communication Skills

A. Residents shall learn to work effectively as part of the general surgical team.

B. Residents shall foster an atmosphere that promotes the effectiveness of each member of the general surgical team

C. Residents shall interact with colleagues and members of the ancillary services in a professional and respectful manner.

D. Residents shall learn to document their practice activities in such a manner that is clear and concise

E. Residents shall participate in the informed consent process for patients being scheduled for elective and emergent/urgent procedures or surgery

F. Residents shall gain an experience in educating and counseling patients about risks and expected outcomes of elective or emergent/urgent procedures or surgeries

G. Residents shall learn to give and receive a detailed sign-out for each service

V. Professionalism
A. Residents shall maintain high ethical standards in dealing with patients, family members, patient data, and other members of the healthcare team

B. Residents shall demonstrate a commitment to the continuity of care of a patient within the confines of the 80-hour duty restrictions

C. Residents shall demonstrate sensitivity to age, gender, and culture of patients and other members of the healthcare team

VI. Systems-based practice

A. Residents shall learn to practice high quality cost effective patient care. This knowledge should be gained through discussions of patient care.

1. Conferences
   a. M&M
   b. Twice monthly Plastics and Hand Conferences

2. Other
   a. Plastic Surgery Rounds
   b. Outpatient clinic
   c. Emergency Department Encounters