GENERAL SURGERY ROTATION
Surgery A, B, TDC & St. Joseph’s Medical Center
(PGY-3)

A. Medical Knowledge

I. Surgical Oncology

Goal: The resident will achieve a detailed knowledge of the evaluation and management of surgical oncology patients.

Objectives: The resident will be able to…

1. Discuss the basic pathophysiology of the mechanisms involved in malignant transformation, tumor growth, and metastases formation
2. Recite the natural history and biologic behavior of specific tumor types, including:
   a. Breast cancer
   b. Colorectal cancer
   c. Other GI malignancies
   d. Pancreatic and hepatobiliary malignancies
   e. Melanoma
   f. Sarcoma
3. Discuss the management of the above malignancies including:
   a. Diagnostic evaluation/studies
   b. Staging
   c. Indications for operative management
   d. Selection of appropriate operative procedures for all cancers above.
   e. adjuvant treatment regimens, including regional limb perfusion, and indication for their use in patients with melanoma
   f. treatment of advanced melanoma
4. Describe the basic steps of the major operative procedures for breast cancer, colorectal cancer, and melanoma
5. Understand the significance of neutropenia in an surgical oncology patient undergoing chemotherapy and the potential impact on surgical therapy and complications
6. Discuss the details of the use/dosing of common chemotherapeutic regimens in surgical oncology patients
7. Discuss the role of neoadjuvant, adjuvant, and palliative chemotherapy and radiation for various cancer types
8. Discuss the toxicities of common chemotherapeutic regimens used in surgical oncology patients
9. Discuss toxicities associated with radiation therapy and importance of total dose of radiation

II. Abdominal Surgery

Goal: The resident will achieve a detailed knowledge of the evaluation and management of the general surgical patient with abdominal complaints.

Objectives: The resident will be able to…

1. Discuss the evaluation, diagnosis, and management of the acute abdomen.
2. Discuss the pathophysiology, evaluation, diagnosis, and surgical management of the small intestines, including:
   a. Small bowel obstruction
   b. Regional enteritis/ Crohn’s Disease
   c. Meckel’s diverticulum
   d. Carcinoid tumors
   e. Appendicitis
   f. Intestinal Ischemia
3. Discuss the Pathophysiology, evaluation, diagnosis, and surgical management of the colon, including:
   a. Diverticulitis/diverticulosis
   b. Large bowel obstruction
   c. Crohn’s disease
   d. Ulcerative colitis
   e. Constipation
   f. Ogilvie’s syndrome
   g. Perirectal abscess
   h. Pilonidal disease
   i. Hemorrhoids
   j. Anal fissures
   k. Perianal fistulas
   l. Lower GI bleeding
   m. Ischemic colon
   n. Polyposis syndromes
   o. Volvulus
4. Discuss the Pathophysiology, evaluation, and diagnosis of the following disorders of the esophagus, stomach, and duodenum. You should begin to learn the basics of surgical management.
   a. Achalasia, diffuse esophageal spasm, and other motility disorders
   b. Esophageal cancer
   c. Barrett’s esophagus
d. Gastroesophageal reflux disease  
e. Benign gastric tumors  
f. Gastritis and upper GI hemorrhage  
g. Malignancies of the stomach and duodenum  
h. Inflammatory bowel disease  

5. Discuss the evaluation, diagnosis, and surgical management of diseases of the pancreas and biliary system, including:  
a. Acute cholecystitis  
b. Chronic cholecystitis and cholelithiasis  
c. Cholangitis  
d. Gallstone pancreatitis  
e. Gallstone ileus and fistula  
f. Gallbladder carcinoma  
g. Acute pancreatitis  
h. Chronic pancreatitis  
i. Pancreatic pseudocyst  
j. Benign and malignant pancreatic neoplasms  
k. Endocrine tumors  
l. Hepatocellular carcinoma  
m. Metastases of the liver from other primary cancers

III. Breast Surgery

Goal: The resident will achieve a detailed knowledge of the evaluation and management of the breast patient.

Objectives: The resident will be able to...  
1. Discuss the pathophysiology, evaluation, diagnosis, and surgical care of a palpable breast mass  
2. Describe the evaluation of non-palpable breast abnormalities  
3. Recite the screening for breast cancer  
4. Discuss the appropriate use of mammography, ultrasound, fine needle aspiration, stereotactic, and open breast biopsies  
5. List the risk factors for developing breast cancer  
6. Discuss the preoperative staging of breast cancer and correlate stage with treatment options and long-term survival  
7. Discuss the genetic predisposition to breast cancer  
8. Discuss the role of prophylactic mastectomy in high risk patients  
9. Discuss the indications for preoperative chemotherapy and radiation therapy for breast cancer.  
10. Discuss the surgical options for different stages of breast cancer, including ductal carcinoma in situ, localized invasive cancer, locally advanced breast cancer, inflammatory breast cancer, and metastatic disease  
11. Know the basic steps of the surgical procedures used for breast disease.
12. Discuss the adjuvant treatment regimens and indications for their use in breast cancer
13. Describe the treatment of advanced breast cancer
14. Discuss the significance of lobular carcinoma in situ and its management
15. Discuss the indications for anti-estrogen therapy
16. Discuss benign diseases of the breast

IV. Minimal Access Surgery

Goal: The resident will achieve a detailed knowledge and understanding of minimally access surgery.

Objectives: The resident will be able to...

1. Discuss the advantages and disadvantages of minimally invasive surgery.
2. Discuss the suitability of minimally invasive surgery for various disease processes.
3. Recite the physiologic effects of pneumoperitoneum, including:
   a. Acidosis
   b. Cardiovascular changes
   c. Urine output
   d. Pulmonary
   e. Air embolism
   f. Deep venous thrombosis
4. Identify and know how to use the basic equipment necessary for a laparoscopic equipment
5. Describe how to trouble shoot laparoscopic equipment in operating room including problems with insufflation, light, cautery, and equipment
6. Describe and be able to perform different techniques of accessing the peritoneal cavity for laparoscopy
7. Discuss the potential intraoperative and postoperative complications of minimally invasive surgery, including the pathophysiology and method of avoidance of the complications

V. Endocrine Surgery

Goal: The resident will achieve a detailed knowledge of the evaluation and management of the endocrine surgery patient.

Objectives: The resident will be able to...

1. Discuss the evaluation, diagnosis, and management of surgical endocrine disease, including:
a. Hot and cold thyroid nodules
b. Adrenal masses and pheochromocytomas
c. Primary, secondary, and tertiary hyperparathyroidism
d. Pancreatic islet tumors
e. Inherited endocrine tumor syndromes
f. Thyroid malignancies
g. Substernal goiters

2. Describe the care of patients with postoperative hypocalcemia
3. Describe the complications associated with thyroidectomy and parathyroidectomy
4. Discuss the preoperative evaluation of adrenal masses
5. Describe the steps involved in thyroidectomy or parathyroidectomy

B. Patient Care

Goal: The resident will provide patient care that is compassionate, appropriate, and effective for the treatment of cardiothoracic problems. PGY-3 residents should begin to take a leadership or “chief” role on the service.

Objectives: The resident will be able to...

1. Perform the preoperative evaluation of the fitness of a patient for surgery including cardiac screening, nutritional status, bowel preps, antibiotic prophylaxis, DVT prophylaxis, pre-operative fluid therapy, etc.
2. Be able to prepare and position patients for open and minimally invasive surgical procedures
3. Independently perform bedside procedures including:
   a. Wound care
   b. Drain care
   c. Feeding tube placement and care
   d. Placement and care of central lines
   e. Placement and care of pleural catheters
   f. Placement and care of nasogastric tubes
   g. Placement and care of foley catheters
4. Achieve mastery of techniques in minimally invasive surgery, including:
   a. Maneuvering an angled laparoscope
   b. Intracorporeal knot-tying
   c. Closing port sites
   d. Endoscopic stapling
   e. Harmonic scalpel use
   f. Placement of endoscopic loop
   g. Bimanual dexterity
5. Achieve mastery of the basic operative skills, including:
   a. Incision of tissues
b. Suturing techniques
c. Knot tying
d. Gentle handling of tissues
e. Bowel anastomosis
f. Stapling techniques
g. Wound closure
h. Dressings

6. Achieve mastery in the following basic general surgery procedures and begin to provide instruction to lower level residents:
   a. Drainage of abscesses
   b. Fistulotomy and sphincterotomy
   c. Rigid proctoscopy
   d. Lymph node biopsies
   e. G- and J-tube insertions
   f. Hernia repairs
   g. Tracheostomy
   h. Breast biopsies

7. Participate, with graduated surgical independence, in general surgery procedures, including:
   a. Bowel resections
   b. Lysis of adhesion
   c. Formation of stomas
   d. Cholecystectomies
   e. Segmental mastectomy
   f. Simple or modified radical mastectomy
   g. Axillary dissection
   h. Sentinel node mapping and sampling

8. Begin to perform, with graduated surgical independence, general surgery procedures (laparoscopic and/or open) including:
   a. Splenectomy
   b. Gastric resections
   c. Pancreatic resections
   d. Liver resections and biliary reconstructions
   e. Deceased donor kidney transplantation
   f. Thyroid lobectomy and total thyroidectomy
   g. Parathyroidectomy
   h. Adrenalectomy
   i. Melanoma procedures
      i. evaluation of suspicious skin lesions
      ii. wide local excision
      iii. sentinel node mapping
      iv. regional lymph node dissections

9. Perform, with graduated independence, postoperative management and care for surgical patients
10. Perform, with graduated independence, the management of intraoperative and postoperative complications of open and minimally invasive surgery.

11. Perform, with graduated independence, interpretation of laboratory and diagnostic tests.

12. Perform, with graduated independence, interpretation of radiologic diagnostic test/examinations

C. Practice Based Learning and Improvement

**Goal:** The resident will investigate and evaluate his or her own patient care practices, appraise and assimilate scientific evidence, and improve patient care practices.

**Objectives:** The resident will be able to...

1. Routinely analyze the effectiveness of his or her own practices in caring for surgery patients
2. Improve own practices in the care of patients by integrating appropriately gathered data and feedback.
3. Educate medical students and other healthcare professionals in the practices of general surgery
4. Function independently with graduated advancement and appropriate faculty supervision
5. Utilize library sources to perform research and perform literature searches.
6. Use information technology to prepare for cases, using in the OR the knowledge of current modalities of care and the scientific evidence for that care
7. Understand the principles of clinical research and the application of biostatistics as it relates to their clinical practice including pretest probability, sensitivity, specificity, accuracy, positive and negative predictive value
8. Guide junior residents (PGY-1 and PGY-2) in practice-based learning and improvement

D. Interpersonal and Communication Skills

**Goal:** The resident will demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and professional associates.

**Objectives:** The resident will be able to…
1. Provide and instruct medical students and junior residents in the art of counseling and obtaining informed consent from patients.
2. Demonstrate compassion for all surgical patients and families.
3. Recognize and counsel the patients and family that need help dealing with the surgical experience; especially those that are dealing with bad news.
4. Listen to patients and their families.
5. Assimilate data and information provided by other members of the general surgery health care team.
6. Chart and record accurate information.
7. Educate patients and families in follow-up strategies and rehabilitation for general surgery patients.
8. Educate patients and families regarding expectations following surgical procedures.

**E. System Based Practice**

**Goal:** The resident will demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.

**Objectives:** The resident will be able to...

1. Coordinates all aspects of the preoperative and postoperative care and rehabilitation surgical patients often in the role of “chief” resident
2. Create a cost-effective, focused work-up of diagnostic testing
3. Advocate for surgical patients within the health care system
4. Facilitate the timely discharge and/or placement of surgery patients
5. Refer surgical patients to the appropriate practitioners and agencies
6. Coordinate the admission of patients and directly communicate with primary care physicians, inpatient house staff, and consultants
7. Discuss the scientific basis and regulations governing clinical trials and their importance in defining appropriate therapy.
8. Coordinate the total care of the surgical patient by partnering with other members of the medical team, such as:
   - Medical oncologist
   - Radiation oncologists
   - Clinical Researchers
   - Pathologist
   - Radiologists
   - Geriatricians
   - PCP’s
   - Hospitalists
   - Critical Care Medicine
   - Nurse coordinators
k. NPs and PAs
l. Social workers
m. Pastoral care
n. Hospice
o. Dieticians

9. Participate in conferences and committees.
   a. Grand rounds
   b. Morbidity and mortality conference
   c. Geriatric education for specialty residents conference
d. Journal club
e. Case conference
f. Tumor boards and surgical oncology
g. Transplant committees
h. GI and colorectal

F. Professionalism

**Goal:** The resident will demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

**Objectives:** The resident will be able to...

1. Develops a sensitivity of the unique stresses placed on families under care for general surgery
2. Exhibits an unselfish regard for the welfare of general surgery patients
3. Demonstrates firm adherence to a code of moral and ethical values
4. Is respectful to patients and their families especially in times of stress to the family unit
5. As team leader, respect and appropriately integrate other members of the general surgery health care team
6. Demonstrates sensitivity to the individual patient’s profession, life goals, and cultural background as they apply to surgery
7. Is reliable, punctual, and accountable for own actions in the OR and clinic
8. Understands the concepts of autonomy, beneficence, nonmaleficence, justice, and respect for life
9. Maintains patient confidentiality

**General Surgery Reference:**

**PRIMARY TEXT:**
Townsend, Courtney, Beauchamp, Daniel, and Evers, B. Mark. 


Cameron, John L. Current Surgical Therapy. 8th ed. Philadelphia: Mosby, 2004

Oncology Reference:

**General Surgery Educational Conference Schedule**

Weekly – Every Wednesday

Surgical Quality Improvement Conference 7:00 – 8:00am
Grand Rounds 8:00 – 9:00am
SCORE Education Conference 9:00 – 10:00am
Case Conference/ Journal Club 10:00 – 11:00pm
Instruction in Simulation 11:00-12:00
Instruction and Practice in Simulation (by schedule times) 1300-1500