



Course Guide for

# SURGERY

## **The Goals of the Surgery Clerkship**

1. Promote the student's attainment of a **fundamental surgical knowledge base**.
2. Introduce the student to **basic surgical procedures**, including suturing techniques, wound management, nasogastric tube placement, central line access, urethral catheterization, and IV catheter insertion.
3. Facilitate **understanding of a surgical approach to clinical problem solving**.
4. Promote **acquisition of basic surgical diagnosis and management capabilities**.
5. Promote the continued **development of the student's professional attitudes and ethical behavior**.
6. Develop an **understanding for appropriate timing of referral** for surgical evaluation.

## **The Objectives of the Surgery Clerkship:**

### Knowledge (cognitive)

By the end of the surgery clerkship, the student is expected to have achieved, at a minimum, knowledge of the following surgical subjects through reading, discussion and hands-on experience. All subjects listed below are covered in your surgical textbooks and should be supplemented as needed by clinical experiences, academic sessions, supplemental reading and journal searches, as well as other avenues as directed by your preceptor. Students will take a surgery NBME Subject Exam at the end of the rotation. This test will include questions that cover concepts typical of national board exams.

**Formal surgical academic sessions will be held weekly to systematically cover these subjects. Students are required to attend these sessions unless specifically excused by the session instructor.**

### *Surgical Subjects*

- A. The Approach to the Surgical Patient
  - a. History taking, utilizing inductive reasoning to establish a diagnosis
  - b. Complete physical exam incorporating necessary special procedures to establish a diagnosis
  - c. Laboratory and other examinations in order to screen for asymptomatic disease that may affect or contraindicate surgical intervention, and to evaluate the nature of metabolic or septic complications
- B. The Principles of Surgical Physiology
  - a. Fluid and electrolytes
  - b. Acid-base disturbances
  - c. Coagulation
  - d. Transfusion therapy
  - e. Wound healing
  - f. Nutrition and the surgical patient
  - g. Shock

- C. Essential topics in general surgery
  - a. Wound closure and management
  - b. Surgical tubes and dressings
  - c. Postoperative complications
  - d. Surgical infections
  
- D. Preoperative evaluation and management
  - a. Identifying preexisting conditions and contributing risk factors
  - b. Medications that may impact surgical decision-making
    - i. (e.g. Coumadin, Plavix, etc.)
  - c. Routine diagnostic testing
  - d. Specific considerations in preoperative management
    - i. Cerebrovascular disease
    - ii. Cardiovascular disease
    - iii. Pulmonary evaluation and screening
    - iv. Renal disease
  - e. Psychological assessment and preparation/ counseling of patient and family
  
- E. Abdomen
  - a. Acute Abdomen
  - b. Hernias
  
- F. Gastrointestinal disorders of:
  - a. Esophagus
  - b. Stomach and duodenum, including UGI bleeding
  - c. Small intestine, including intestinal obstruction and fistulae
  - d. Colon, rectum and anus, including LGI bleeding
  - e. Liver, including portal hypertension, and biliary tract
  - f. Pancreas
  
- G. Endocrine disorders
  - a. Thyroid
  - b. Parathyroid
  - c. Thymus
  - d. Adrenal
  - e. Multiple endocrine neoplasia and tumors of the endocrine
  - f. pancreas

- H. Breast
  - a. Evaluation
  - b. Benign and malignant lesions and their characteristics
  - c. Surgical and medical management of benign and malignant breast diseases
  
- I. Trauma—including chest trauma and ATLS
  - a. General assessment
  - b. Prioritizing approach to management
  - c. Understanding the various mechanisms of injury
  - d. Physiologic response to injury
  
- J. Burns—including thermal, electrical and chemical burns
  - a. Assessment of depth of burn
  - b. Management of inhalation injury
  - c. Fluid management
  - d. Wound management
  
- K. Spleen
  - a. Pathologic conditions
  - b. Surgical approach to various conditions of the spleen
  - c. Complications of splenectomy
  
- L. Peripheral Vascular Surgery
  - a. Occlusive disease
  - b. Aneurysm
  - c. Venous disease
  
- M. Thoracic Disorders
  - a. General Principles of thoracic surgery
  - b. Benign and malignant lesions of the chest wall, lungs, mediastinum and heart
  - c. Surgical Management of Congenital and Acquired Cardiac Disease
  
- N. Head and Neck Surgery
  - a. Benign and malignant lesions of the head and neck, including parotid gland
  
- O. Subspecialty surgery
  - a. Transplantation Surgery
  - b. Urology
  - c. Plastic and Reconstructive Surgery, including Hand

- d. Neurosurgery
- e. Orthopedics
- f. Pediatric Surgery
- g. Laparoscopic Surgery
- h. Ophthalmology
- i. Gynecology

### Skills (Psychomotor)

By the end of the clerkship, the student is expected to have developed proficiency in **basic surgical skills** such as knot-tying, suturing, scrubbing, gowning and gloving and sterile surgical technique.

### **Problem Solving and Professional Development**

By the end of the Clerkship, the student is expected to have achieved a satisfactory level of performance and development in the areas listed on the surgical Clinical Evaluation.

Specifically, the student should demonstrate acceptable levels of achievement in their ability to:

1. Take a history from a surgical patient
2. Conduct a physical examination on a surgical patient
3. Interpret clinical findings to arrive at a surgical diagnosis, a differential diagnosis, and a management plan and be able to comprehensively and concisely present such to the surgical preceptor
4. Develop and maintain complete and concise records of patient problems, including history and physical examination reports, preoperative and postoperative orders and notes and progress notes
5. Develop and give accurate and concise case presentations and surgical subject discussions
6. Develop rapport with patients and showing courtesy and concern for the patient's well being
7. Follow operating room protocol
8. Show evidence of continued professional development by interacting effectively with peers and other health care personnel, taking responsibility for patient care and showing a degree of self-confidence appropriate to his/her level of knowledge

9. Show motivation for learning and achievement by taking responsibility for his/her own learning (reading and other responsibilities), being available and prepared, and showing a consistent warm and caring attitude toward patients and health care personnel
10. Utilize osteopathic principles and techniques as appropriate to the clinical situation

### **Clinical Objectives for Sub-specialty Surgery**

1. Perform and present a history and physical examination appropriate to the system.
2. Interpret and discuss x-rays and diagnostic tests of the involved system. Know when special diagnostic tests are indicated.
3. Develop a differential diagnosis and outline a basic treatment regiment for the more frequently encountered problems of the sub-specialty.
4. Understand when consultation with a sub-specialty surgeon is indicated. Distinguish sub-specialty conditions that primary care physicians can treat.
5. Identify emergencies in the sub-specialty that can result in loss of life, limb, and/or cause permanent disability.
6. Demonstrate proper OR scrubbing technique and maintenance of sterility.
7. Demonstrate appropriate ethical and moral medical practice with patients, colleagues, staff, and faculty.
8. Demonstrate appropriate interpersonal skills.