



The Florida State University
College of Medicine

Surgery Clerkship

BCC 7160

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Library Subject Guides

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Instructors

Education Director

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Clerkship Directors

Campus	Director
Fort Pierce	Kenneth Bridges M.D., FACS
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Orlando	Timothy Childers M.D., FACS
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Sarasota	Edward Bradley III. M.D., FACS
Tallahassee & Thomasville	Richard Zorn MD, FACS
Marianna Site	Steven Spence M.D.

Course Overview

Surgery is an eight week experience in the care of patients suffering from conditions that are amenable to treatment by the use of the hand (surgery; fr. Greek: cheir [hand] and ergon [work], literally `handiwork`). Students will be assigned to an individual General Surgery clerkship faculty member for six weeks who will shepherd the student experience in the operating room, out-patient clinics, and office based practice. Students will have the opportunity to work one-half day with an anesthesiologist to learn airway management. It is the student's responsibility to contact the Department of Anesthesia to arrange this. For the final two weeks of the rotation, the student will undergo a concentrated subspecialty experience to be chosen by the student, from among the surgical subspecialties of Orthopedics, Urology, or Otolaryngology.

Major emphasis in this rotation will be placed upon issues and problems in General Surgery, but student familiarity with common problems in the surgical subspecialties (thoracic and cardiovascular, orthopedics, urology, otolaryngology, and neurosurgery) will be tested on the end-of-service NBME clinical subject examination.

The majority of time that the student spends on the Surgery Clerkship will be spent as an apprentice to a surgeon from the clerkship faculty. This contact will provide the student with an appreciation of what a practicing community surgeon does, both in the operating room and in out-patient settings. In addition, each student will have weekly scheduled contacts with the site-specific Clerkship Director, who will oversee E*Value entries, in order to provide breadth of patient experience, avoid duplication, and assure compliance with clerkship objectives. Didactic sessions will be held weekly with the Clerkship Director. Students will take night call twice weekly, and will be expected to be a part of any surgical admission or procedure occurring during their time on call. The work week will consist of Monday through Saturday (inclusive). Note that students must adhere to the ACGME rules regarding the workweek, which include working no more than 80 hours per week, no more than 24 hours continuously, except an additional 6 hours may be added to the 24 to perform wrap-up duties, and have at least one of every 7 days completely off from educational activities.

The keys to success during this rotation lie principally in two areas: (1) Enthusiastic attendance at all clinical functions, and (2) A daily text reading program covering not only the clinical encounters of the day, but also that daily amount of text necessary to complete the core material by the end of the clerkship. The required texts are listed below.

Student Self-Study Program

A self-study program has been designed to assist the student in selecting the core course material ([see Appendix](#)) from among the vast amount of surgical information available. While you are certainly free to design your own learning program, adherence to this program will result in exposure to

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the core material and breadth of knowledge deemed necessary for students to have acquired during this clerkship. The Mann text (described below) will provide you with the opportunity to make the most of your surgical experience. As you are an adult learner, and beyond the spoon-feeding stage, it will be up to you to decide how many chapters in the required text should be read each week. This suggested self-study program is designed for you to complete reading the text by the end of the course. Following this program will favorably position you to take a tough end-of-service NBME exam, that is comprehensive, timed, and has a significant failure rate.

The suggested reading program in the Mann text is as follows:

Week 1: Chapters 1-10, Introduction

Week 2: Chapters 11-19, Abdominal Pain

Week 3: Chapters 20-31, Surgical Oncology

Week 4: Chapters 32-41, Vascular Surgery, GI Bleeding

Week 5: Chapters 42-55, Post-operative Care, Trauma

Week 6: Chapters 56-69, Bariatrics, Cardiothoracic, Pediatric Surgery

Week 7: Chapters 70-81, Transplantation, SICU

Week 8: No assignment

When the reading program is completed, the student will have achieved familiarity with those Topics and Sub-topics listed in the [Appendix](#), that constitute the core material for Surgery

When first confronted by Surgery, many students see only the technical side; i.e., the procedures done in the operating room. While surgical technique is unquestionably important, of equal importance to the results from operative surgery are preoperative preparation (including diagnosis and workup), and postoperative care. NOTE WELL: THE NBME CLINICAL SUBJECT EXAM DOES NOT TEST YOUR KNOWLEDGE OF SURGICAL TECHNIQUE! Rather, this examination concentrates on establishing a diagnosis (45-50%), principles of management (25-30%), nutritional and digestive diseases (25-30%), and understanding mechanisms of disease (15-20%). Much of the exam is in clinical vignette form, in which you will be given data and expected to come to a diagnosis, order additional tests, or pick a therapy. Many students have seen only the drama of the operating room, failing to see this “medical” side of Surgery, and have therefore felt that the exam is “almost all medicine”. Don’t make that same mistake! The best surgeons are “Internists with Operating Privileges”!

This exam tests the application and integration of knowledge, rather than the recall of isolated facts. For these reasons, you cannot just study isolated facts, or cram at the last minute. You need to be on a schedule of programmed reading throughout the clerkship if you wish to be successful.

Required Reading Materials

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Students will be responsible for the material in "Cope's Early Diagnosis of the Acute Abdomen", 21st Ed., edited by Silen, W., Oxford University Press, New York, 2005. This is one of the most highly regarded books in all of medicine, and mastery of the material contained herein will remove all mystery from the diagnosis of abdominal pain. Regardless of your eventual specialty, if you are in clinical medicine, you will see patients with abdominal pain. It is available online from the COM library.

The text for this course will be "Surgery: A Competency-Based Companion by Barry D. Mann, Saunders/Elsevier, Philadelphia, 2009. This text is not on-line, and will need to be purchased by you. The cost is approximately \$40. Following the reading program listed above in this text will favorably position you for the tough end-of-service examination.

Core Material

Listed in the [Appendix](#) are those Topics that are considered the [Core Information for Surgery](#), and for which students will be held accountable. As graduate students, you are responsible for choosing how, and from where, you will acquire this knowledge base. Although there are a number of excellent surgical texts available, the Mann text is the shortest, while offering authoritative material. Blackbourne's Surgical Recall is considered helpful by many. For review immediately prior to the NBME exam, I wholeheartedly recommend Doherty's Current Essentials of Surgery, Lange, 2005. Individual topics are outlined and all pertinent information is provided on one page. Regardless of which text(s) you choose, make certain that you have mastered those *subtopics* listed in the [Appendix](#), as they are important and appear with great frequency on examinations.

For those students wishing to pursue a surgical career, the latest edition of "Sabiston Textbook of Surgery", 18th Ed, edited by Townsend, CM Jr., W. B. Saunders, Phila., is recommended as encyclopedic. Choosing this option, however, will significantly increase your reading time, as topics are considered in great detail. "The Physiologic Basis of Surgery", 4th Ed., edited by O'Leary, J.P., Lippincott Williams & Wilkens, Phila., 2008, is a requisite for anyone contemplating becoming a surgeon. Although primarily designed for surgical residents facing the yearly American Board of Surgery In-Site Training Examination (ABSITE), it represents an outstanding review of physiology for non-surgeons as well.

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"Controversies in Surgery" Paper

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In order to familiarize you with the importance of evidence-based medicine in determining best clinical practice, and to assist you with how and where to collect evidence-based data, each student will also be responsible for writing a 1000 word paper (MS-Word, three pages, *double-spaced*, not including references, consisting of the following:

- a. Identify a controversial problem in Surgery that interests you.
- b. Present the pro and con evidence-based arguments with full references
- c. Form your own conclusion and justify your position.

The paper is **not** intended to be a re-statement of a book chapter, in which there is extensive discussion of the Background of the issue, and a description of the application of a Surgical Technique. Rather, you are to: (1) briefly state the nature of the controversy you have identified (one paragraph or less), (2) collect evidence-based data from the literature (not opinions), (3) incorporate the actual data into the paper (not the summaries and conclusions of referenced authors), and (4) reach a conclusion based upon the specific data that you included in your exposition. There should be enough evidence based data recorded in your paper to convince a third party of the validity of your conclusions. It is insufficient to KNOW the correct conclusion, your data and analysis must PROVE it! If you need a review of what evidence-based data is, and the hierarchy of validity, please review the topic by [clicking here \(EBM\)](#). This paper is due **prior** to the NBME Clinical Subject examination on the last day of the rotation. Late papers will not be accepted.

NOTE WELL: Failure to adhere to the following procedures for the DUAL submission of the paper will lead to an IR, with possible reduction in grade, and/or the necessity to write another paper!

1. You MUST upload a copy to Safe Assign on the Blackboard site. . **All papers will be checked against a computerized registry (“Safe Assign”) for similarities to other papers in content and expression.**
2. **In addition**, a copy MUST be uploaded to the Student Academic web site.

You may send your paper to whomever else you wish, but you MUST submit to both Safe Assign and the Student Academic web site. It will be time and date stamped in both sites. Contact your Clerkship Director if unsure how to proceed.

E*Value Data Entry Policies for Surgery

Categorization of extent of patient contact may be somewhat different on Surgery compared to other rotations. In general, the three categories of contact are:

- **Full:** focused H & P, AND participate in plans for workup/therapy (i.e., scrub on patient, discuss diagnosis and treatment with attending, etc.), AND follow.
- **Minimal:** brief contact, usually less than 10 minutes (look at x-rays, or lesion, etc.)
- **Moderate:** everything else

All surgical procedures done under general anesthesia are to be assigned to the “major” category. Please note that the same patient should not be entered more than twice (including Post-Operative visits) unless a new problem has developed. The rationale is that while I am interested in your workload, I am even more interested in your breadth of experience.

All entries **must** be completed within 48 hours of completing the course in order to avoid concerns about professionalism.

Patient Encounters Required to Meet Course Objectives

The following guidelines are offered to suggest the types and minimal numbers of patients to be encountered by students on the Surgery rotation in order to meet the objectives stated above: Failure to meet this minimal number will result in an IR, and additional assignments necessary in order to pass the course. Also note that entering minimal numbers of patient contacts will not qualify a student for consideration of Honors.

A	<u>Total number of patients encountered (including 30 major operations)</u>	<u>110</u>
B	<u>Gastrointestinal disease</u>	<u>40</u>
C	<u>General surgical patients exclusive of GI disease</u>	<u>20</u>
D	<u>Oncology</u>	<u>20</u>
E	<u>Trauma</u>	<u>5</u>
F	<u>Urology</u>	<u>3*</u>
G	<u>Otolaryngology</u>	<u>3</u>
H	<u>Orthopedics</u>	<u>3</u>
I	<u>Cardiovascular</u>	<u>2</u>
J	<u>Procedures (including wound suturing, foley and nasogastric tube placement, abscess drainage, venipuncture, intravenous lines, and endotracheal intubation)</u>	<u>15</u>

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REPEAT: Failure to enter the required number of patient contacts as specified above may result in a lowering of your grade and additional requirements before a final grade can be determined.

*Patient numbers will be higher or lower depending upon the specific two week selective experience. Although the LCME no longer requires specific numbers of patients to be encountered for certification, we have found that collection of these data helps us in judging student initiative, and assists in determining the mix and breadth of student contact with patients.

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 <#>gastrointestinal disease – 40¶
 <#>general surgical patients exclusive of GI disease – 20¶
 <#>oncology – 20¶
 <#>trauma – 5¶
 <#>urology – 3*¶
 <#>otolaryngology – 3*¶
 <#>orthopedics – 3*¶
 <#>cardiovascular – 2¶
 <#>procedures – 15 (including wound suturing, foley and nasogastric tube placement, abscess drainage, venipuncture, intravenous lines, and endotracheal intubation)¶

Competencies-Objectives-Assessment

COM Competencies

a) Patient Care	b) Medical Knowledge	c) Practice-based Learning
d) Communication Skills	e) Professionalism	f) Systems-based Practice

Course Objectives

By the completion of the Clerkship, the student will be expected to be able to:

1. Demonstrate familiarity with “core surgical knowledge”, as described in the Syllabus, including commonly encountered problems in Orthopedics, Urology Otolaryngology, Thoracic/Cardiovascular, and Neurosurgery (Competencies a, b)
2. Conduct a focused medical history, targeted physical examination, and create a meaningful differential diagnosis for surgical conditions (a, b)
3. Recognize an acute surgical abdomen, and identify its probable cause (a, b)
4. Exhibit the capability to provide concise and logical patient presentations (a, b, d)
5. Develop familiarity with suturing wounds, bladder catheterization, and airway management (a)
6. Demonstrate proficiency in: scrubbing and maintaining sterile technique, dressing clean and contaminated wounds, wound closure with sutures/staples, drain management, wound debridement, and operative assistance. (a, b)
7. Appreciate ethical, cultural, and public health issues in Surgery, including traditionally underserved populations, and oversight of surgical practice at the local, state, and Federal levels (a, c, d, e, and f)
8. Exhibit facility in applying informatics to critical appraisal of the surgical literature, and to making surgical diagnostic and therapeutic decisions. (a, b, c, e)
9. Be familiar with common anesthetic agents, their administration, recovery from their usage, and develop facility with airway management. (a, b,)
10. Effectively and respectfully communicate with colleagues, staff, patients, and families, emphasizing patient centered care (a, d, e, and f)

Assessment of Competencies (Grading)

The standardized clerkship [policy](#) can be found on the [Office of Medical Education website](#).

Satisfactory student acquisition of these listed competencies will be assessed by Clerkship Faculty, the site-specific Clerkship Director, and the Education Director. In addition to the clinical evaluation of medical knowledge, the end-of-rotation NBME examination will also be used to assess the

depth of the student's medical knowledge. Student evaluation is a result of 360 degree clinical and professionalism evaluations by clerkship faculty and clerkship directors, patient and staff evaluations, the evidence-based paper project, and the NBME exam. Evaluation materials will be collated by the Education Director, and a final grade submitted that encompasses each of the evaluation metrics. An Honors grade requires excellence in each of these areas.

Longitudinal Integrated Curriculum (LIC)

General information and policy regarding the Longitudinal Integrated Curriculum (LIC) in Marianna can be found on the syllabi page of the Office of Medical Education website. The Surgery Clerkship Blackboard site also has a content area with specific dates and deadlines for the Surgery clerkship that will be presented over the course of the entire year, with multiple evaluations and formative assessment periods.

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Surgical Selectives in ENT, Urology, and Orthopedics

Immediately upon the completion of the six week experience in General Surgery, the student will begin a two week concentrated exposure to common problems frequently encountered by primary care physicians in either ENT, Urology, or Orthopedics, the specific subspecialty to be chosen by the student, working with the Campus Dean. This experience is designed to give a flavor of the subspecialty, rather than to be a comprehensive coverage of the material. During this subspecialty exposure, the student will be assigned to a specific surgeon, who will guide the student through office based problems, hospital rounds, and operative experiences. More specific information regarding the specific goals and objectives of the Selectives is listed immediately below.

Selective Clerkship in Otolaryngology

The 2-week Otolaryngology Clerkship will cover major pathologic conditions in the head and neck regularly encountered by primary care physicians. The student will be assigned to a preceptor who will work with the student on the diagnosis and treatment of these common lesions, in clinics, on hospital rounds, and in the operating room.

Required Reading

The chapter on Otorhinolaryngology in your chosen Surgery text, or as assigned by the clerkship faculty member.

Teaching Methods

The student will have ample exposure to common ENT problems, with an emphasis on correct diagnosis as opposed to treatment. Teaching will consist of oral discussion of common ENT problems while in surgery, in the clinics, and on rounds with their preceptor. Approximately 50 patients with ENT conditions will be seen. A formative oral examination in the form of a case presentation will be given to the Clerkship Director at the end of the two week session.

Course Evaluation

The student must provide feedback to the clerkship director and preceptor following the 2-week clerkship. This will assist in evaluating the effectiveness of the clerkship for future years.

Course Objectives

The student will demonstrate an ability to conduct a focused medical history and perform a good physical exam, in this case a comprehensive head and neck exam. In the head and neck area most problems are visible or palpable, so the student should move forward quickly.

Students will learn to work up common ENT and Head and Neck Surgical problems, including the use of laboratory studies and imaging modalities, such as CTs, and will be able to describe the medical and surgical options for the most commonly encountered ENT problems, such as:

Ear:

- Acute Otitis Media
- Chronic Otitis Media
- Perforation of the eardrum
- Students should be able to discuss deafness and its possible causes
- Students should have a basic understanding of vertigo

Nose:

- Allergic versus Non Allergic rhinitis
- Mechanical obstruction from deviated septum
- Nasal polyps
- Nasal Fractures
- Epistaxis

Throat and Pharynx:

- Acute pharyngitis
- Peritonsillar abscess
- Evaluation sleep apnea
- Obstructive breathing in adults and adolescent
- Airway problems in Adults and Children

Evaluation of a neck mass:

- Lymph node vs.
- Salivary tumors vs.
- Head and neck tumors

Selective Clerkship in Orthopedics

This two week clerkship will introduce students to those orthopedic conditions commonly seen in primary care practices, and will focus on the diagnosis and treatment of these conditions. The student will be assigned a preceptor who will work directly with the student in the clinic, in the operating room, in the emergency room, and on hospital rounds.

Required Reading

The chapter on Orthopedics in your chosen Surgery text, as well as Hoppenfield's Physical Examination of the Spine and Extremities, which serves as a reference during the clinical clerkship.

Course Evaluation

The student will provide feedback to the preceptor following the two-week clerkship. This will assist the preceptor in evaluating the effectiveness of the clerkship so that improvements can continually be made to meet the needs of the students.

Course Objectives

The student will learn to take an accurate and directed history as well as perform an appropriate physical examination. By the second week of the clerkship, students will be expected to evaluate orthopedic patients prior to their being seen by the preceptor, thereby receiving immediate feedback and instruction on the development of an appropriate physician / patient interpersonal and professional relationship, history taking and appropriate physical exam as well as interpretation of appropriate radiographic studies.

Ample opportunity will be afforded each student to learn the basics of both plain radiographic and MRI / CT imaging of orthopedic conditions.

The student will be exposed to appropriate use and application techniques of splints for the upper and lower extremities.

The student will learn appropriate non-operative measures for common orthopedic problems. The student will also be able to differentiate between what can be treated conservatively by a primary care physician and what should be referred to an orthopedic surgeon.

The students will be taught safe methods of injecting the knee and shoulder where appropriate. The student will also be taught the appropriate use of rehabilitation / physical therapy for various orthopedic diagnoses.

The student will gain a comfort level with commonly prescribed "orthopedic medications", such as NSAIDs, antibiotics and narcotic pain medications when necessary.

During the two-week clerkship the student will encounter the following orthopedic problems:

- **Knee:** meniscal tears, osteoarthritis, knee effusion, ligamentous instability of the knee, anterior knee pain
- **Shoulder and Arm:** shoulder impingement, partial and full thickness rotator cuff tears, shoulder instability, biceps tendonitis, frozen shoulder.
- **Elbow:** tennis elbow / lateral epicondylitis.
- **Foot and Ankle:** foot and ankle sprain, ankle fracture, plantar fasciitis.

Other common orthopedic problems that may well be seen during the two week clerkship include: carpal tunnel syndrome, deQuervain's stenosing tenosynovitis, trigger finger, trigger thumb, cervical disk disease, lumbar disk disease, low back pain, hip arthritis, trochanteric bursitis, compression fracture of the spine, fracture reduction with IV sedation, and / or hematoma blocks.

Selective Clerkship in Urology

This two week clerkship will introduce students to common urologic conditions seen in primary care practices, and will focus on the diagnosis and treatment of these conditions. The student will be assigned a preceptor who will work directly with the student. Although the clerkship will stress office-based urology, exposure to surgical procedures in the operating room and hospital rounds will also be included.

Required Reading

The Chapter on Urology in your chosen text is required. Smith's General Urology (16th Edition 2003) will serve as a resource during the clinical clerkship.

Course Evaluation

The student must provide feedback to the preceptor following the two-week clerkship. This will assist the preceptor in evaluating the effectiveness of the clerkship so that improvements can continually be made to meet the needs of the students.

Course Objectives

The student will learn to take an accurate and directed history, perform an appropriate physical examination, and diagnose common urologic problems. By the second week of the clerkship, students will be expected to evaluate urologic patients prior to their being seen by the preceptor, thereby receiving immediate feedback and instruction on the development of an appropriate physician/patient interpersonal and professional relationship, history taking and appropriate physical exam as well as interpretation of appropriate laboratory and radiographic studies.

Opportunity will be afforded each student to learn the basics of plain radiography, excretory urography, and computed tomography as they apply to urologic conditions. Ultrasonography will also be covered, particularly as it relates to the examination of the prostate.

The student should be able to describe appropriate non-operative measures for common urologic problems. The student will also be able to differentiate between what can be treated conservatively by a primary care physician and what should be referred to a urologic specialist. The student will be expected to exhibit proficiency in the microscopic evaluation of the urinary sediment.

The student will become familiar with commonly prescribed medications for urologic disorders. The judicious and appropriate use of antibiotics for urinary tract pathogens will be stressed.

The student will be exposed to office cystoscopy, urodynamic evaluation, and vasectomy.

During the two-week clerkship it is likely that the student will likely encounter the following urologic problems:

- Prostate: PSA elevation, Benign Prostatic Hyperplasia, Prostate Cancer, Prostatitis
- Urinary tract infections
- Hematuria
- Urinary incontinence
- Erectile Dysfunction
- Urinary stone disease
- Renal masses and cysts
- Urothelial tumors

Policies

Americans with Disabilities Act

Candidates for the M.D. degree must be able to fully and promptly perform the essential functions in each of the following categories: Observation, Communication, Motor, Intellectual, and Behavioral/Social. However, it is recognized that degrees of ability vary widely between individuals. Individuals are encouraged to discuss their disabilities with the College of Medicine's Director of Student Counseling Services and the FSU Student Disability Resource Center to determine whether they might be eligible to receive accommodations needed in order to train and function effectively as a physician. The Florida State University College of Medicine is committed to enabling its students by any reasonable means or accommodations to complete the course of study leading to the medical degree.

[The Office of Student Counseling Services](#)

Medical Science Research Building G146

Phone: (850) 645-8256

Fax: (850) 645-9452

This syllabus and other class materials are available in alternative format upon request. For more information about services available to FSU students with disabilities, contact the:

[Student Disability Resource Center](#)

874 Traditions Way
108 Student Services Building
Florida State University
Tallahassee, FL 32306-4167
Voice: (850) 644-9566
TDD: (850) 644-8504
sdrc@admin.fsu.edu

Academic Honor Code

The Florida State University Academic Honor Policy outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. (Florida State University [Academic Honor Policy](#))

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Attendance Policy

The College of Medicine has detailed attendance policies as they relate to each cohort and events that conflict with course schedules See [FSUCOM Student Handbook](#) for details of attendance policy, notice of absences and remediation.

Library Policy

The [COM Maguire Medical Library](#) is primarily a digital library that is available 24/7 through secure Internet access. Library resources that support this course are available under "Subject Guides" found under *Resources by subject* from the main menu on the library website. In addition, many of the point-of-care resources are available for full download to mobile data devices. Upon student request, items not found in the library collection may be borrowed through interlibrary loan.

APPENDIX

Listed below are the General Topics for which you will be held responsible. Included within each General Topic are several Subtopics that have proved to be of frequent interest to test-writers. Once you have mastered the information included in the larger General Topic, make certain that you are familiar with the Subtopics as well.

1) Preoperative and Postoperative Care

Subtopics: nutritional assessment, immunocompetence, infection risks, factors affecting wound healing, respiratory failure

2) Postoperative Complications

Subtopics: fat embolism, aspiration, myocardial infarction, cardiac failure, gastric dilatation, wound dehiscence, geriatric problems, such as delirium, dementia, and the propensity to fall.

3) Special Medical Problems in Surgical Patients

a) *Endocrine Disease in the Surgical Patient*

Subtopics: diabetes, hyperparathyroidism, hypothyroidism, adrenal insufficiency

b) *Heart Disease and the Surgical Patient*

Subtopics: coronary artery disease

c) *Renal Disease and the Surgical Patient*

Subtopics: renal failure

d) *Hematologic Disease*

Subtopics: surgery in patients with hematologic malignancies and/or receiving anticoagulants, disorders of hemostasis; coagulation factor concentrates.

4) Wound Healing

Subtopics: biochemistry of healing; factors retarding healing

5) Inflammation, Infection, and Antibiotics

Subtopics: infection risk factors, necrotizing infections, antibiotic colitis, tetanus, rabies, venomous bites.

6) Fluid and Electrolyte Management

Subtopics: know this chapter cold; particularly acid-base balance! If given values for HCO₃, pH, PaCO₂ you must be able to identify acidosis/alkalosis, metabolic/respiratory, compensated/uncompensated states.

7) Surgical Metabolism and Nutrition

Subtopics: complications of parenteral nutrition, desirability of enteral nutrition

8) Anesthesia

Subtopics: nerve injuries due to malpositioning, complications of anesthesia

9) Shock and Acute Pulmonary Failure

Subtopics: cardiac compressive shock, cardiogenic, neurogenic, and septic shock, ARDS, fat embolism, pulmonary embolism.

10) Management of the Injured Patient

Subtopics: tension pneumothorax, flail chest, aortic rupture, arteriovenous fistula, liver/pancreas injuries.

11) Burns and Other Thermal Injuries

Subtopics: burn complications, heat stroke, frostbite.

12) Head and Neck Tumors

Subtopics: salivary gland tumors, squamous cell cancers.

13) Thyroid and Parathyroid

Subtopics: evaluation of thyroid nodules, thyroid carcinoma, hypercalcemic crisis, secondary hyperparathyroidism.

14) Breast

Subtopics: Paget's disease (including clinical appearance), carcinoma during pregnancy and lactation, non-invasive carcinoma, nipple discharge

15) Thoracic Wall, Pleura, Mediastinum, and Lung

Subtopics: chylothorax, mesothelioma, superior vena cava syndrome, solitary pulmonary nodule, myasthenia gravis.

16) The Heart

Subtopics: Acquired Heart Disease: valvular disease, aortic dissection

Congenital Heart Disease: VSD, transposition, tetralogy, PDA, coarctation.

17) Esophagus and Diaphragm

Subtopics: achalasia, scleroderma, Zenker's diverticulum, GERD, Boerhaave's syndrome, diaphragmatic hernias.

18) The Acute Abdomen

Subtopics: you learned all of this when you read Cope

19) Peritoneal Cavity

Subtopics: pseudomyxoma, retroperitoneal fibrosis, workup of abdominal masses

20) Stomach and Duodenum

Subtopics: gastrinoma, volvulus, Mallory-Weiss, MALT tumors, GI bleeding

21) Liver and Portal Venous System

Subtopics: hepatoma, hepatic metastases, hepatic adenoma, Budd-Chiari, splenic vein thrombosis

22) Biliary Tract

Subtopics: gallstone ileus, cholangitis, emphysematous cholecystitis

23) Pancreas

Subtopics: cystic neoplasms, islet cell tumors, pancreatic ascites/effusion, adenocarcinoma

24) Spleen

Subtopics: hereditary spherocytosis, ITP, TTP, post-splenectomy sepsis, myeloid metaplasia

25) Appendix

Subtopics: know this chapter!

26) Small Intestine

Subtopics: blind loop syndrome, mesenteric occlusion, carcinoid tumors, Crohn`s disease.

27) Large Intestine

Subtopics: polyps, volvulus, colitis.

28) Anorectum

Subtopics: rectal prolapse, rectal fissure, fistula-in-ano, pilonidal cyst

29) Hernias and Other Lesions of the Abdominal Wall

Subtopics: femoral hernia, obturator hernia

30) Adrenals

Subtopics: primary aldosteronism, pheochromocytoma, incidentalomas, Cushings.

31) Arteries

Subtopics: embolism, visceral aneurysms, thoracic outlet syndrome, renovascular hypertension, cerebrovascular disease

32) Veins and Lymphatics

Subtopics: deep vein thrombosis, thromboembolism, lymphedema

33) Neurosurgery and Surgery of the Pituitary

Subtopics: subdural and epidural hemorrhage, meningiomas, arteriovenous malformations, trigeminal neuralgia

34) Otolaryngology

Subtopics: facial nerve paralysis, vocal cord paralysis, inflammatory neck masses.

35) The Eye and Ocular Adnexa

Subtopics: glaucoma, retinal detachment, corneal abrasion, perforation

36) Urology

Subtopics: calculi, renal carcinoma, prostatic and testicular carcinomas

37) Gynecology

Subtopics: ectopics, cervical carcinoma, carcinomas of the uterus and ovary, molar pregnancy, endometriosis

38) Orthopedics

Subtopics: compartment syndromes, Morton`s toe, hip fractures, lumbar discs

39) Plastic and Reconstructive Surgery

Subtopics: basal cell, melanoma, and squamous carcinomas

40) Hand Surgery

Subtopics: nerve injuries, hand space infections, carpal tunnel syndrome

41) Pediatric Surgery

Subtopics: thyroglossal and branchial cysts, Hirschsprungs disease, Wilms tumor, neuroblastoma, esophageal atresia, undescended testicle

42) Oncology

Subtopics: sarcomas, Hodgkins, paraneoplastic syndromes, breast and colon chemotherapy

43) Organ Transplantation

Subtopics: histocompatibility testing, pharmacology of immunosuppressive drugs