Curriculum Outline for General Surgery Residency 2014–2015

Surgical Council on Resident Education

www.surgicalcore.org
CURRICULUM OUTLINE
FOR
GENERAL SURGERY RESIDENCY

Patient Care and Medical Knowledge

2014–2015

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Originally published in 2008, the SCORE® Curriculum Outline for General Surgery Residency is a list of patient care and medical knowledge topics to be covered in a five-year general surgery residency program. The outline is updated annually to remain contemporary and reflect feedback from SCORE member organizations and specialty surgical societies.

The patient care outline consists of 28 organ system-based categories containing a total of 544 topics. Each category is separated into Diseases/Conditions (Broad and Focused) and Operations/Procedures (Essential-Common, Essential-Uncommon, and Complex). The medical knowledge section contains 13 categories with a total of 79 topics.

For this edition, some procedures have been consolidated, and several of the Complex topics deleted. Changes from the previous edition are indicated in the Excel version of this outline, available at www.surgicalcore.org. Please note topics listed in this booklet may not directly match those currently on the SCORE Portal — this booklet is forward-looking, reflecting the latest updates.

The Surgical Council on Resident Education (SCORE) is a nonprofit consortium formed in 2006 by the principal organizations involved in U.S. surgical education. SCORE’s mission is to improve the education of general surgery residents (trainees) through the development of a national curriculum for general surgery residency training. The members of SCORE are:

American Board of Surgery
American College of Surgeons
American Surgical Association
Association of Program Directors in Surgery
Association for Surgical Education
Residency Review Committee for Surgery of the ACGME
Society of American Gastrointestinal and Endoscopic Surgeons
## PATIENT CARE CURRICULUM OUTLINE CONTENTS

### BY CATEGORY

<table>
<thead>
<tr>
<th>Category</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdomen – General</td>
<td>6</td>
</tr>
<tr>
<td>Abdomen – Hernia</td>
<td>7</td>
</tr>
<tr>
<td>Abdomen – Biliary</td>
<td>8</td>
</tr>
<tr>
<td>Abdomen – Liver</td>
<td>9</td>
</tr>
<tr>
<td>Abdomen – Pancreas</td>
<td>10</td>
</tr>
<tr>
<td>Abdomen – Spleen</td>
<td>11</td>
</tr>
<tr>
<td>Abdomen – General, Hernia</td>
<td>6, 7</td>
</tr>
<tr>
<td>Abdomen – Biliary</td>
<td>8</td>
</tr>
<tr>
<td>Abdomen – Liver</td>
<td>9</td>
</tr>
<tr>
<td>Abdomen – Pancreas</td>
<td>10</td>
</tr>
<tr>
<td>Abdomen – Spleen</td>
<td>11</td>
</tr>
<tr>
<td>Alimentary Tract – Esophagus</td>
<td>12</td>
</tr>
<tr>
<td>Alimentary Tract – Stomach</td>
<td>13</td>
</tr>
<tr>
<td>Alimentary Tract – Small Intestine</td>
<td>14</td>
</tr>
<tr>
<td>Alimentary Tract – Large Intestine</td>
<td>15</td>
</tr>
<tr>
<td>Alimentary Tract – Anorectal</td>
<td>16</td>
</tr>
<tr>
<td>Endoscopy</td>
<td>17</td>
</tr>
<tr>
<td>Breast</td>
<td>18</td>
</tr>
<tr>
<td>Endocrine</td>
<td>19</td>
</tr>
<tr>
<td>Skin and Soft Tissue</td>
<td>20</td>
</tr>
<tr>
<td>Surgical Critical Care</td>
<td>21-22</td>
</tr>
<tr>
<td>Trauma</td>
<td>23-25</td>
</tr>
<tr>
<td>Vascular – Arterial Disease</td>
<td>26-27</td>
</tr>
<tr>
<td>Vascular – Venous</td>
<td>28</td>
</tr>
<tr>
<td>Vascular – Access</td>
<td>29</td>
</tr>
<tr>
<td>Transplantation</td>
<td>30</td>
</tr>
<tr>
<td>Thoracic Surgery</td>
<td>31</td>
</tr>
<tr>
<td>Pediatric Surgery</td>
<td>32-33</td>
</tr>
<tr>
<td>Plastic Surgery</td>
<td>34</td>
</tr>
<tr>
<td>Genitourinary</td>
<td>35</td>
</tr>
<tr>
<td>Gynecology</td>
<td>36</td>
</tr>
<tr>
<td>Head and Neck</td>
<td>37</td>
</tr>
<tr>
<td>Nervous System</td>
<td>38</td>
</tr>
<tr>
<td>Transplantation</td>
<td>30</td>
</tr>
<tr>
<td>Thoracic Surgery</td>
<td>31</td>
</tr>
<tr>
<td>Pediatric Surgery</td>
<td>32-33</td>
</tr>
<tr>
<td>Plastic Surgery</td>
<td>34</td>
</tr>
<tr>
<td>Genitourinary</td>
<td>35</td>
</tr>
<tr>
<td>Gynecology</td>
<td>36</td>
</tr>
<tr>
<td>Head and Neck</td>
<td>37</td>
</tr>
<tr>
<td>Nervous System</td>
<td>38</td>
</tr>
</tbody>
</table>

### DISEASES BY LEVEL

<table>
<thead>
<tr>
<th>Level</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broad</td>
<td>39-42</td>
</tr>
<tr>
<td>Focused</td>
<td>42-44</td>
</tr>
</tbody>
</table>

### OPERATIONS BY LEVEL

<table>
<thead>
<tr>
<th>Level</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essential – Common</td>
<td>45-46</td>
</tr>
<tr>
<td>Essential – Uncommon</td>
<td>46-48</td>
</tr>
<tr>
<td>Complex</td>
<td>48-49</td>
</tr>
</tbody>
</table>
1. Anesthesia ............................................. 50
2. Biostatistics and Evaluation of Evidence ............................................. 50
3. Fluids, Electrolytes and Acid-Base Balance .............................................. 50
4. Geriatric Surgery and End-of-Life Care ........................................................ 51
5. Immunology ............................................. 51
6. Infection and Antimicrobial Therapy ............................................. 51
7. Minimally Invasive Surgery – Principles ..................................................... 52
8. Nutrition and Metabolism .......................................................... 52
9. Oncology and Tumor Biology .......................................................... 52
10. Pharmacology .................................................... 52
11. Preoperative Evaluation and Perioperative Care ..................................... 53
12. Transfusion and Disorders of Coagulation ............................................. 53
13. Wound Healing .................................................... 53
SCORE was founded in 2006 by the leading organizations involved in U.S. surgical education to answer the question, “What do we expect our residents to know and be able to do proficiently by the end of their training?” As described by the Accreditation Council on Graduate Medical Education (ACGME), we expect our graduating residents to be competent in six areas: patient care and procedural skills; medical knowledge; professionalism; communication; practice-based learning; and systems-based practice. In 2004, the General Surgery Residency Committee of the American Board of Surgery began to develop a patient care curriculum by listing the specific patient care competencies expected of graduating general surgery residents. This effort was then expanded into this document, with significant input from the Association of Program Directors in Surgery, as well as many specialty surgical societies.

The patient care competency was chosen as the first subject for curriculum development because many felt this area was the most in need of definition and attention. An outline of topics for the medical knowledge competency was added with the 2010-2011 edition. The other four ACGME competences will be added in the future.

This outline should not be viewed as static. It will be reviewed annually to introduce new topics as needed, delete obsolete topics, or change the depth and breadth of existing topics.

EXPLANATION OF THE CURRICULUM OUTLINE

This document contains a list of patient care topics to be included in a curriculum for a five-year general surgery residency training program. It also specifies in basic terms the depth and breadth of training that is expected for each (see “Classification System” on page 5).

To care for the surgical patient, not only is it necessary to master knowledge related to specific diseases and operations, but also knowledge of systems and conditions that affect the body as a whole, such as sepsis or coagulopathy. The topics
in the medical knowledge section are generally of this variety, and also cover areas such as biostatistics and perioperative complications.

This outline has been approved by SCORE as the basis for full curriculum development, which is currently underway. Learning objectives are first developed for each topic. Instructional materials are then identified or created to support the teaching of that topic. Assessment tools are also being developed to determine if residents have actually acquired the desired knowledge and skills, and finally the effectiveness of the entire program will have to be regularly evaluated. When all of these have been accomplished, the curriculum will be complete.

THE SCORE PORTAL

SCORE has created the SCORE Portal (www.surgicalcore.org) for the delivery of educational content and assessment in support of the curriculum to general surgery residency programs. Learning “modules” are available on the portal for nearly all of the topics listed in this booklet, with modules for the few remaining topics to be posted by the end of this year. The Excel version of this outline indicates which topics do not yet have modules on the portal.

Each module on the portal features learning objectives, study questions and a variety of resource materials, including textbook chapters, videos and radiologic images. Multiple-choice questions are also available to assess resident knowledge. Additional features to facilitate online learning will be implemented this year, as well as new content. For more information, please visit www.surgicalcore.org.
CLASSIFICATION SYSTEM

The patient care curriculum topics are organized into 28 organ system-based categories. Within each category, the topics are further separated into diseases/conditions and operations/procedures. The topics are then stratified as follows:

Diseases/Conditions

Two levels:

• **BROAD** – A resident should be able to care for all aspects of disease and provide comprehensive management.

• **FOCUSED** – A resident should be able to make the diagnosis, provide initial management/stabilization, but will not be expected to be able to provide comprehensive management.

Operations/Procedures

Three levels:

• **ESSENTIAL – COMMON** – Frequently performed operations in general surgery; specific procedure competency is required by end of training.

• **ESSENTIAL – UNCOMMON** – Uncommon, often urgent, operations seen in general surgery practice but not typically done in significant numbers by residents; specific procedure competency required by end of training (but may not be attained by case volume alone).

• **COMPLEX** – Not consistently performed by general surgeons in training and not typically performed in general surgery practice. Generic experience in complex procedures is required but not competence in individual procedures. Some residency programs may provide sufficient experience for competence in specific procedures.
PATIENT CARE

Category 1: Abdomen – General

Diseases/Conditions

BROAD
• Abdominal Pain - Acute
• Intra-abdominal Abscess
• Rectus Sheath Hematoma

FOCUSED
• Abdominal Pain - Chronic
• Ascites - Chylous
• Bacterial Peritonitis - Spontaneous
• Desmoids/Fibromatoses
• Mesenteric Cyst
• Peritoneal Neoplasms - Carcinomatosis
• Peritoneal Neoplasms - Pseudomyxoma peritonei

Operations/Procedures

ESSENTIAL — COMMON
• Exploratory Laparotomy - Laparoscopic
• Exploratory Laparotomy - Open
• Peritoneal Dialysis Catheter Insertion
• Peritoneal Lesion - Biopsy

ESSENTIAL — UNCOMMON
• Intra-abdominal Abscess - Drainage

COMPLEX
• Pseudomyxoma - Operation
Diseases/Conditions

**BROAD**
- Inguinal and Femoral Hernias
- Miscellaneous Hernias
- Prosthetic Mesh Infections - Management
- Umbilical and Epigastric Hernias
- Ventral Hernia

Operations/Procedures

**ESSENTIAL — COMMON**
- Inguinal and Femoral Hernia - Laparoscopic Repair
- Inguinal and Femoral Hernia - Open Repair
- Ventral Hernia - Laparoscopic Repair
- Ventral Hernia - Open Repair

**ESSENTIAL — UNCOMMON**
- Abdominal Wall Reconstruction - Components Separation
- Miscellaneous Hernias - Repair

**COMPLEX**
- Diaphragmatic Hernia - Repair
Category 3: Abdomen – Biliary

Diseases/Conditions

BROAD

• Bile Duct Injury - Iatrogenic
• Cholangitis
• Cholecystitis - Acalculous
• Cholecystitis - Acute and Chronic
• Choledocholithiasis
• Gallbladder Polyps
• Gallstone Ileus
• Jaundice - Obstructive
• Pancreatitis - Biliary

FOCUSED

• Ampullary Stenosis/Sphincter of Oddi Dysfunction
• Bile Duct Neoplasms
• Choledochal Cyst
• Gallbladder Cancer
• Primary Sclerosing Cholangitis

Operations/Procedures

ESSENTIAL – COMMON

• Cholecystectomy with or without Cholangiography - Laparoscopic
• Cholecystectomy with or without Cholangiography - Open

ESSENTIAL – UNCOMMON

• Cholecystostomy
• Choledochoenteric Anastomosis
• Choledochoscopy
• Common Bile Duct Exploration - Open

COMPLEX

• Bile Duct Cancer - Operation
• Bile Duct Injury - Acute Repair
• Bile Duct Neoplasms - Operation
• Common Bile Duct Exploration - Laparoscopic
• Gallbladder Cancer - Operation
• Transduodenal Sphincteroplasty
• Ultrasound of the Biliary Tree
Category 4: Abdomen – Liver

Diseases/Conditions

BROAD
- Hepatic Abscess
- Hepatic Mass - Evaluation

FOCUSED
- Budd-Chiari Syndrome
- Cirrhosis/Portal Hypertension (Ascites)
- Esophageal Varices
- Hepatic Neoplasms - Benign
- Hepatic Neoplasms - Malignant
- Hepatic Neoplasms - Metastatic
- Hepatitis - Viral (Occupational Risk)

Operations/Procedures

ESSENTIAL — COMMON
- Hepatic Biopsy - Laparoscopic
- Hepatic Biopsy - Open

ESSENTIAL — UNCOMMON
- Hepatic Abscess - Drainage

COMPLEX
- Hepatic Ultrasound - Intraoperative
- Portal-Systemic Shunt
- Segmentectomy/Lobectomy - Laparoscopic
- Segmentectomy/Lobectomy - Open
Category 5: Abdomen – Pancreas

Diseases/Conditions

BROAD
- Pancreatic Pseudocyst
- Pancreatitis - Acute/Pancreatic Necrosis/Abscess

FOCUSED
- Intraductal Papillary Mucinous Neoplasms
- Pancreas Divisum
- Pancreatic Neoplasms - Cystic
- Pancreatic Neoplasms - Endocrine
- Pancreatic Neoplasms - Exocrine
- Pancreatitis - Autoimmune
- Pancreatitis - Chronic (Including Hereditary Pancreatitis)/Pancreatic Insufficiency
- Periampullary Neoplasms - Other

Operations/Procedures

ESSENTIAL — UNCOMMON
- Pancreatectomy - Distal
- Pancreatic Debridement
- Pancreatic Pseudocyst - Drainage

COMPLEX
- Ampullary Resection for Tumor
- Pancreatectomy - Frey and Beger Procedures
- Pancreatectomy - Total
- Pancreatic Ultrasound - Intraoperative
- Pancreaticoduodenectomy
- Pancreaticojejunostomy - Longitudinal
Category 6: Abdomen – Spleen

Diseases/Conditions

**BROAD**
- Postsplenectomy Sepsis

**FOCUSED**
- Hemolytic Anemias
- Hypersplenism - Secondary and Splenomegaly
- Idiopathic Thrombocytopenic Purpura
- Splenic Abscess, Cysts, and Neoplasms

Operations/Procedures

**ESSENTIAL — COMMON**
- Splenectomy - Laparoscopic
- Splenectomy - Open

**ESSENTIAL — UNCOMMON**
- Splenectomy/Splenorrhaphy - Partial
Category 7: Alimentary Tract – Esophagus

Diseases/Conditions

**BROAD**
- Achalasia
- Dysphagia
- Esophageal Diverticula
- Esophageal Perforation - Iatrogenic
- Esophageal Perforation - Spontaneous
- Gastroesophageal Reflux/Barrett’s Esophagus
- Hiatal Hernias
- Mallory-Weiss Syndrome
- Stricture

**FOCUSED**
- Esophageal Caustic Ingestion and Foreign Bodies
- Esophageal Motility Disorders other than Achalasia
- Esophageal Neoplasms - Benign
- Esophageal Neoplasms - Malignant

Operations/Procedures

**ESSENTIAL — COMMON**
- Antireflux Procedure - Laparoscopic

**ESSENTIAL — UNCOMMON**
- Antireflux Procedure - Open
- Cricopharyngeal Myotomy with Zenker’sDiverticulum - Excision
- Esophageal Perforation - Repair/Resection
- Paraesophageal Hernia - Laparoscopic Repair
- Paraesophageal Hernia - Open Repair

**COMPLEX**
- Esophagectomy/Esophagogastrectomy
- Esophagomyotomy (Heller)
Category 8: Alimentary Tract – Stomach

Diseases/Conditions

**BROAD**
- Gastric Cancer
- Gastric Carcinoid Tumor
- Gastric Lymphoma
- Gastric Polyps
- Gastrointestinal Bleeding - Upper
- Peptic Ulcer Disease with Complications
- Stress Gastritis

**FOCUSED**
- Gastric Bezoars and Foreign Bodies
- Gastroparesis
- Morbid Obesity
- Postgastrectomy Syndromes

Operations/Procedures

**ESSENTIAL – COMMON**
- Gastrostomy - Open
- Gastrostomy - Percutaneous Endoscopic

**ESSENTIAL – UNCOMMON**
- Duodenal Perforation - Repair
- Gastrectomy - Partial/Total
- Vagotomy and Drainage

**COMPLEX**
- Morbid Obesity - Operation
- Postgastrectomy Syndromes - Revisional Procedures
Diseases/Conditions

**BROAD**
- Enterocutaneous Fistula
- Intussusception
- Meckel’s Diverticulum
- Mesenteric Ischemia - Acute (Arterial, Venous, and Nonocclusive)
- Paralytic Ileus
- Pneumatosis
- Radiation Enteritis
- Small Intestinal Adenocarcinoma
- Small Intestinal Carcinoid Tumor
- Small Intestinal Crohn’s Disease - Surgical Management
- Small Intestinal GISTs
- Small Intestinal Lymphoma
- Small Intestinal Obstruction
- Small Intestinal Polyps

**FOCUSED**
- Enteric Infections and Blind Loop Syndrome
- Short Bowel Syndrome

Operations/Procedures

**ESSENTIAL — COMMON**
- Adhesiolysis - Laparoscopic
- Adhesiolysis - Open
- Feeding Jejunostomy - Laparoscopic
- Feeding Jejunostomy - Open
- Ileostomy
- Ileostomy Closure
- Small Intestinal Resection - Open

**ESSENTIAL — UNCOMMON**
- Small Intestinal Resection - Laparoscopic
- Superior Mesenteric Artery Embolectomy/Thrombectomy

**COMPLEX**
- Stricturoplasty for Crohn’s Disease
Category 10: Alimentary Tract – Large Intestine

Diseases/Conditions

BROAD
- Appendiceal Neoplasms
- Appendicitis
- Clostridium Difficile-Associated Diarrhea
- Colitis - Ischemic
- Colon Cancer
- Colon Neoplasms - Miscellaneous
- Colonic Crohn’s Disease - Surgical Management
- Colonic Polyps
- Colonic Volvulus
- Diverticular Bleeding
- Diverticulitis
- Gastrointestinal Bleeding - Lower
- Obstruction - Large Intestinal
- Ulcerative Colitis - Surgical Management

FOCUSED
- Constipation - Functional
- Irritable Bowel Syndrome

Operations/Procedures

ESSENTIAL – COMMON
- Appendectomy - Laparoscopic
- Appendectomy - Open
- Colectomy, Partial - Laparoscopic
- Colectomy, Partial - Open
- Colostomy
- Colostomy Closure

ESSENTIAL – UNCOMMON
- Colectomy - Subtotal (with Ileorectal Anastomosis/Ileostomy)

COMPLEX
- Coloproctectomy - Total (with Ileorectal Pull-Through)
Category 11: Alimentary Tract – Anorectal

Diseases/Conditions

BROAD
• Anal Cancer
• Anal Fissure
• Anorectal Abscess and Fistulae
• Hemorrhoids
• Perianal Condylomas
• Rectal Cancer

FOCUSED
• Anal Dysplasia/Sexually Transmitted Diseases
• Fecal Incontinence
• Rectal Prolapse

Operations/Procedures

ESSENTIAL — COMMON
• Anal Fistulotomy/Seton Placement
• Anal Sphincterotomy - Internal
• Anorectal Abscess - Drainage
• Banding for Internal Hemorrhoids
• Hemorrhoidectomy
• Perianal Condylomas - Excision

ESSENTIAL — UNCOMMON
• Anal Cancer - Excision

COMPLEX
• Anorectal Fistulae - Complex Repair
• Incontinence/Constipation - Operation
• Rectal Cancer - Abdominoperineal Resection and Pelvic Exenteration
• Rectal Cancer - Transanal Resection
• Rectal Prolapse - Repair
Category 12: Endoscopy

Operations/Procedures

ESSENTIAL — COMMON

• Bronchoalveolar Lavage
• Bronchoscopy
• Colonoscopy
• Esophagastroduodenoscopy
• Laryngoscopy
• Proctoscopy and Sigmoidoscopy
Category 13: Breast

Diseases/Conditions

BROAD
- Atypical Ductal Hyperplasia
- Atypical Lobular Hyperplasia and Lobular Carcinoma In Situ
- Benign Disease - Fat Necrosis
- Benign Disease - Fibroadenoma
- Benign Disease - Fibrocystic Breast Changes
- Benign Disease - Galactocele
- Benign Disease - Gynecomastia
- Benign Disease - Intraductal Papilloma
- Benign Disease - Radial Scar
- Benign Inflammatory Disease - Mastitis and Abscess
- Benign Inflammatory Disease - Mondor Disease
- Breast Cancer - Hereditary
- Breast Cancer - Inflammatory
- Breast Cancer - Male
- Breast Cancer - Invasive
- Breast Cancer - Paget’s Disease of the Nipple
- Breast Cancer during Pregnancy and Lactation
- Breast Mass
- Breast Pain
- Ductal Carcinoma In Situ
- Mammographic Abnormalities
- Nipple Discharge

FOCUSED
- Phyllodes Tumor
- Postmastectomy Reconstruction Options

Operations/Procedures

ESSENTIAL — COMMON
- Axillary Sentinel Lymph Node Biopsy and Lymphadenectomy
- Breast Biopsy with or without Needle Localization
- Breast Cyst - Aspiration
- Duct Excision
- Mastectomy - Partial
- Mastectomy - Simple, Modified Radical, and Radical

COMPLEX
- Breast Biopsy - Image-Guided
Category 14: Endocrine

Diseases/Conditions

BROAD

• Addisonian Crisis
• Adrenal Cancer
• Adrenal Mass
• Hyperaldosteronism - Primary
• Hypercortisolism - Cushing Syndrome/Disease
• Hyperparathyroidism
• Hyperthyroidism
• Hypothyroidism - Postoperative
• Pheochromocytoma
• Thyroid Cancer
• Thyroid Nodule

FOCUSED

• Multiple Endocrine Neoplasias
• Parathyroid Cancer
• Thyroiditis

Operations/Procedures

ESSENTIAL — COMMON

• Parathyroidectomy
• Thyroidectomy - Partial or Total

ESSENTIAL — UNCOMMON

• Ultrasound of the Thyroid

COMPLEX

• Adrenalectomy
Category 15: Skin and Soft Tissue

Diseases/Conditions

BROAD
• Basal Cell and Squamous Cell Carcinoma
• Cellulitis
• Epidermal Cyst
• Felon
• Hidradenitis
• Melanoma and Nevi
• Miscellaneous Skin Neoplasms
• Necrotizing Soft Tissue Infections
• Paronychia
• Pilonidal Cyst/Sinus
• Soft Tissue Masses - Evaluation
• Surgical Site Infection

FOCUSED
• Decubitus Ulcer
• Lymphedema/Lymphangitis
• Soft Tissue Sarcomas

Operations/Procedures

ESSENTIAL — COMMON
• Melanoma - Wide Local Excision
• Pilonidal Cystectomy
• Sentinel Lymph Node Biopsy for Melanoma
• Skin/Soft Tissue Lesions - Excisional and Incisional Biopsy
• Soft Tissue Infections - Incision, Drainage, Debridement

COMPLEX
• Ilioinguinal-Femoral Lymphadenectomy
• Soft Tissue Sarcoma - Resection
Category 16: Surgical Critical Care

Diseases/Conditions

BROAD

• Abdominal Compartment Syndrome
• Anaphylaxis
• ARDS and Respiratory Failure
• Cardiac Arrhythmias - Common
• Cardiac Failure
• Cardiogenic Shock
• Coagulopathy
• Derangements of Electrolytes and Acid-Base Balance
• Endocrine Dysfunction
• Gastrointestinal Failure
• Hepatic Failure and Hepatorenal Syndrome
• Hypovolemic Shock
• Neurogenic Shock
• Neurologic Dysfunction
• Pneumonia - Hospital-Acquired
• Postoperative Delirium
• Renal Failure
• Septic Shock

Operations/Procedures

ESSENTIAL — COMMON

• Airway Management/Ventilator Management
• Arterial Catheter Placement
• Central Venous Catheter Placement
• Compartment Pressures (Abdomen, Extremity) - Measurement
• Defibrillation and Cardioversion
• Endotracheal Intubation
• Enteral Feeding Tube Placement
• Invasive Hemodynamic Monitoring
• Oxygen Administration Devices
• Paracentesis
• Pulmonary Artery Catheter Placement
• Thoracentesis
• Ultrasound Use for Intravascular Access
• Urinary Catheterization

(continued next page)
Category 16: Surgical Critical Care

ESSENTIAL — UNCOMMON

• Damage Control Laparotomy and Management of the Open Abdomen

COMPLEX

• Cardiac Pacing
• Temporary Transvenous Pacemaker
Category 17: Trauma

Diseases/Conditions

BROAD

- Aortic Injury
- Bladder Injury
- Burns - Electrical and Chemical
- Burns - Flame and Scald
- Cardiac Tamponade
- Colon and Rectal Injury
- Diaphragmatic Injury
- Esophageal Injury
- Frostbite and Hypothermia
- Gastric Injury
- Geriatric Trauma
- Hemothorax - Injury-Related
- Hepatic Injury
- Initial Assessment and Management of Trauma
- Laryngeal and Tracheal Injury
- Myocardial Contusion
- Pancreatic and Duodenal Injury
- Pediatric Trauma
- Pelvic Fractures
- Pharyngeal and Cervical Esophageal Injury
- Pneumothorax - Injury-Related
- Pulmonary Injury
- Renal Injury
- Retroperitoneal Hematoma
- Rib Fractures
- Small Intestinal Injury
- Splenic Injury
- Sternal Fractures
- Trauma in Pregnancy
- Ureteral Injury
- Vascular Injury - Abdomen
- Vascular Injury - Extremities
- Vascular Injury - Neck
- Vascular Injury - Thorax

(continued next page)
Category 17: Trauma

FOCUSED

- Animal and Insect Bites and Stings
- Extremity Fractures and Traumatic Amputations
- Head Injury - Penetrating and Closed
- Human Bites
- Nerve Injury - Neck
- Smoke Inhalation Injury and Carbon Monoxide Poisoning
- Spine Fracture
- Sprains, Strains, and Dislocations
- Tracheal and Bronchial Injury
- Urethral Injury

Operations/Procedures

ESSENTIAL — COMMON

- Focused Abdominal Sonography for Trauma (FAST)
- Gastrointestinal Tract Injury - Operation
- Temporary Closure of the Abdomen
- Wounds, Major - Debride/Suture

ESSENTIAL — UNCOMMON

- Abdominal Aorta or Vena Cava Injury - Repair
- Bladder Injury - Repair
- Cardiac Injury - Repair
- Carotid Artery Injury - Repair
- Duodenal Trauma - Management
- Esophageal Injury - Operation
- Exploratory Laparoscopy
- Exploratory Laparotomy
- Fasciotomy for Injury
- Hepatic Injury - Packing and Repair
- Neck Exploration for Injury
- Pancreatic Injury - Operation
- Renal Injury - Repair/Resection
- Splenectomy/Splenorrhaphy
- Thoracoscopy for Management of Hemothorax
- Truncal and Peripheral Vessels - Repair
- Ureteral Injury - Repair

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Category 17: Trauma

COMPLEX

• Burn Debridement and Grafting of Major Burns
• Hepatic Injury - Resection
• Tendon - Repair
Category 18: Vascular – Arterial Disease

Diseases/Conditions

BROAD

• Acute Arterial Thrombosis
• Acute Limb Ischemia
• Aortic Thrombosis
• Aortoiliac Disease
• Cerebrovascular Disease
• Compartment Syndromes
• Diabetic Foot Infections
• Peripheral Arterial Emboli
• Peripheral Vascular Disease and Claudication

FOCUSED

• Aortic Dissection
• Arterial Aneurysms - Aortic
• Arterial Aneurysms - Peripheral
• Arterial Aneurysms - Visceral
• Chronic Visceral Disease
• Hypercoagulable Syndromes
• Nonatherosclerotic Occlusive Diseases
• Renal Artery Disease
• Thoracic Outlet Syndrome
• Vascular Graft Infections

Operations/Procedures

ESSENTIAL — COMMON

• Amputations - Lower Extremity
• Embolectomy/Thrombectomy - Arterial

ESSENTIAL — UNCOMMON

• Abdominal Aortic Aneurysm - Endovascular/Open Repair
• Aortofemoral Bypass
• Extra-anatomic Bypass
• Femoral-popliteal Bypass
• Infrapopliteal Bypass

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Category 18: Vascular – Arterial Disease

**COMPLEX**

- Arterial Occlusive Disease - Endarterectomy
- Carotid Endarterectomy
- Endovascular - Therapeutic, Including Thrombolysis
- Femoral Aneurysm - Repair
- Graft-enteric Fistula - Management
- Infrarenal and Aortoiliac Aneurysm - Repair
- Popliteal Aneurysm - Repair
- Pseudoaneurysm - Repair
- Suprarenal Abdominal Aortic Aneurysm - Repair
- Ultrasound in Diagnosis of Vascular Diseases
- Visceral Occlusive Disease - Operation
Category 19: Vascular – Venous

Diseases/Conditions

BROAD
• Thrombophlebitis - Acute and Suppurative
• Varicose Veins
• Venous Stasis/Chronic Venous Insufficiency
• Venous Thrombosis/Pulmonary Embolism

Operations/Procedures

ESSENTIAL – COMMON
• Vena Caval Filter - Insertion
• Venous Insufficiency/Varicose Veins - Operation

ESSENTIAL – UNCOMMON
• Sclerotherapy - Peripheral Vein
Category 20: Vascular – Access

Diseases/Conditions

BROAD
• Vascular Access for Dialysis
• Venous Access for Long-Term Therapy

Operations/Procedures

ESSENTIAL – COMMON
• Arteriovenous Graft/Fistula
• Percutaneous Vascular Access
• Venous Access Devices - Insertion
Category 21: Transplantation

Diseases/Conditions

BROAD
• Brain Death

FOCUSED
• Donor Selection Criteria
• Indications for Transplantation (Kidney, Liver, Pancreas)
• Opportunistic Infections
• Organ Preservation
• Post-Transplant Malignancies

Operations/Procedures

COMPLEX
• En Bloc Abdominal Organ Retrieval
• Live Donor Hepatectomy
• Live Donor Nephrectomy
• Liver Transplant
• Pancreas Transplant
• Renal Transplant
Category 22: Thoracic Surgery

Diseases/Conditions

**BROAD**
- Hemothorax
- Pleural Effusion/Empyema
- Pneumothorax

**FOCUSED**
- Chylothorax
- Lung Cancer
- Mediastinal Tumors and Cysts
- Mediastinitis
- Metastatic Tumors of the Lung
- Superior Vena Cava Syndrome
- Tracheoesophageal Fistula
- Tracheoinnominate Fistula

Operations/Procedures

**ESSENTIAL — COMMON**
- Chest Tube Placement and Management

**ESSENTIAL — UNCOMMON**
- Exploratory Thoracotomy - Open and Thoracoscopic
- Partial Pulmonary Resection - Open and Thoracoscopic
- Pericardial Window for Drainage

**COMPLEX**
- Empyema - Management
- Pleurodesis
Diseases/Conditions

BROAD
- Abdominal Mass
- Abdominal Pain - Acute
- Gastrointestinal Bleeding - Lower
- Hypertrophic Pyloric Stenosis
- Inguinal Hernia
- Intussusception
- Malrotation
- Meckel’s Diverticulum
- Tracheal/Eosophageal Foreign Bodies
- Umbilical Hernia

FOCUSED
- Biliary Atresia
- Choledochal Cysts
- Congenital Aganglionosis (Hirschsprung’s Disease)
- Congenital Diaphragmatic Hernia
- Cryptorchidism
- Duodenal Atresia/Stenosis
- Esophageal Atresia/Tracheoesophageal Fistula
- Gastrochisis/Omphalocele
- Imperforate Anus
- Intestinal Atresia/Meconium Ileus
- Necrotizing Enterocolitis
- Neuroblastoma
- Wilms Tumor

Operations/Procedures

ESSENTIAL — COMMON
- Inguinal Hernia - Repair
- Umbilical Hernia - Repair

ESSENTIAL — UNCOMMON
- Intussusception - Operation
- Malrotation - Operation
- Meckel’s Diverticulum - Excision
- Pyloromyotomy

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Category 23: Pediatric Surgery

**COMPLEX**

- Antireflux Procedure
- Branchial Cleft Anomaly - Excision
- Chest Wall Deformity - Repair
- Diaphragmatic Hernia - Repair
- Esophageal Atresia/Tracheoesophageal Fistula - Repair
- Hirschsprung’s Disease - Operation
- Imperforate Anus - Operation
- Intestinal Atresia/Stenosis - Repair
- Meconium Ileus - Operation
- Necrotizing Enterocolitis - Operation
- Omphalocele/Gastroschisis - Repair
- Orchiopexy
- Thyroglossal Duct Cyst - Excision
- Wilms Tumor/Neuroblastoma - Excision
Category 24: Plastic Surgery

Diseases/Conditions

BROAD
• Abdominal Wall Reconstruction

Operations/Procedures

ESSENTIAL — COMMON
• Skin Grafting

ESSENTIAL — UNCOMMON
• Complex Wound Closure
Category 25: Genitourinary

Diseases/Conditions

BROAD
• Hydrocele

FOCUSED
• Genitourinary Neoplasms
• Obstructive Uropathy and Urolithiasis
• Ureteral Injury - iatrogenic

Operations/Procedures

ESSENTIAL — UNCOMMON
• Cystostomy
• Hydrocelectomy
• Nephrectomy
• Orchiectomy
• Ureteral Injury, iatrogenic - Repair
Category 26: Gynecology

Diseases/Conditions

BROAD
• Ectopic Pregnancy
• Ovarian Mass/Cyst - Incidental
• Pelvic Inflammatory Disease

FOCUSED
• Endometriosis
• Ovarian Neoplasms - Benign and Malignant
• Uterine Neoplasms - Benign and Malignant

Operations/Procedures

ESSENTIAL — UNCOMMON
• Hysterectomy
• Salpingo-Oophorectomy

COMPLEX
• Cesarean Section
**Category 27: Head and Neck**

**Diseases/Conditions**

**BROAD**
- Neck Mass - Evaluation
- Upper Airway Obstruction

**FOCUSED**
- Lymphoma/Hodgkin’s Disease
- Oral Cavity/Pharynx, Laryngeal, and Salivary Gland Cancer

**Operations/Procedures**

**ESSENTIAL — COMMON**
- Lymph Node Biopsy
- Tracheostomy

**ESSENTIAL — UNCOMMON**
- Cricothyroidotomy

**COMPLEX**
- Modified Neck Dissection
- Parotidectomy
Category 28: Nervous System

Diseases/Conditions

BROAD
• Pain, Acute - Management

FOCUSED
• Pain, Chronic - Management

Operations/Procedures

ESSENTIAL — UNCOMMON
• Nerve Block - Digital
• Nerve Block - Intercostal

COMPLEX
• Nerve Block(s) - Peripheral other than Digital
DISEASES/CONDITIONS BY LEVEL

BROAD

**Abdomen - General**
- Abdominal Pain - Acute
- Intra-abdominal Abscess
- Rectus Sheath Hematoma

**Abdomen - Hernia**
- Inguinal and Femoral Hernias
- Miscellaneous Hernias
- Prosthetic Mesh Infections - Management
- Umbilical and Epigastric Hernias
- Ventral Hernia

**Abdomen - Biliary**
- Bile Duct Injury - Iatrogenic
- Cholangitis
- Cholecystitis - Acalculous
- Cholecystitis - Acute and Chronic
- Choledocholithiasis
- Gallbladder Polyps
- Gallstone Ileus
- Jaundice - Obstructive
- Pancreatitis - Biliary

**Abdomen - Liver**
- Hepatic Abscess
- Hepatic Mass - Evaluation

**Abdomen - Pancreas**
- Pancreatic Pseudocyst
- Pancreatitis - Acute/Pancreatic Necrosis/Abscess

**Abdomen - Spleen**
- Postsplenectomy Sepsis

**Alimentary Tract - Esophagus**
- Achalasia
- Dysphagia
- Esophageal Diverticula
- Esophageal Perforation - Iatrogenic
- Esophageal Perforation - Spontaneous
- Gastroesophageal Reflux/Barrett’s Esophagus
- Hiatal Hernias
- Mallory-Weiss Syndrome
- Stricture

**Alimentary Tract - Stomach**
- Gastric Cancer
- Gastric Carcinoid Tumor
- Gastric Lymphoma
- Gastric Polyps
- Gastrointestinal Bleeding - Upper
- Peptic Ulcer Disease with Complications
- Stress Gastritis

**Alimentary Tract - Small Intestine**
- Enterocutaneous Fistula
- Intussusception
- Meckel’s Diverticulum
- Mesenteric Ischemia - Acute (Arterial, Venous, and Nonocclusive)
- Paralytic Ileus
- Pneumatosis
- Radiation Enteritis
- Small Intestinal Adenocarcinoma
- Small Intestinal Carcinoid Tumor
- Small Intestinal Crohn’s Disease - Surgical Management
- Small Intestinal GISTs
- Small Intestinal Lymphoma
- Small Intestinal Obstruction
- Small Intestinal Polyps
Alimentary Tract - Large Intestine
Appendiceal Neoplasms
Appendicitis
Clostridium Difficile-Associated Diarrhea
Colitis - Ischemic
Colon Cancer
Colon Neoplasms - Miscellaneous
Colonic Crohn’s Disease - Surgical Management
Colonic Polypos
Colonic Volvulus
Diverticular Bleeding
Diverticulitis
Gastrointestinal Bleeding - Lower
Obstruction - Large Intestinal
Ulcerative Colitis - Surgical Management

Alimentary Tract - Anorectal
Anal Cancer
Anal Fissure
Anorectal Abscess and Fistulae
Hemorrhoids
Perianal Condylomas
Rectal Cancer

Breast
Atypical Ductal Hyperplasia
Atypical Lobular Hyperplasia and Lobular Carcinoma In Situ
Benign Disease - Fat Necrosis
Benign Disease - Fibroadenoma
Benign Disease - Fibrocystic Breast Changes
Benign Disease - Galactocele
Benign Disease - Gynecomastia
Benign Disease - Intraductal Papilloma
Benign Disease - Radial Scar
Benign Inflammatory Disease - Mastitis and Abscess
Benign Inflammatory Disease - Mondor Disease
Breast Cancer - Hereditary
Breast Cancer - Inflammatory
Breast Cancer - Male
Breast Cancer - Invasive
Breast Cancer - Paget’s Disease of the Nipple
Breast Cancer during Pregnancy and Lactation
Breast Mass
Breast Pain
Ductal Carcinoma In Situ
Mammographic Abnormalities
Nipple Discharge

Endocrine
Addisonian Crisis
Adrenal Cancer
Adrenal Mass
Hyperaldosteronism - Primary
Hypercortisolism - Cushing Syndrome/Disease
Hyperparathyroidism
Hyperthyroidism
Hypothyroidism - Postoperative
Pheochromocytoma
Thyroid Cancer
Thyroid Nodule

Skin and Soft Tissue
Basal Cell and Squamous Cell Carcinoma
Cellulitis
Epidermal Cyst
Felon
Hidradenitis
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Skin and Soft Tissue (cont.)
Melanoma and Nevi
Miscellaneous Skin Neoplasms
Necrotizing Soft Tissue Infections
Paronychia
Pilonidal Cyst/Sinus
Soft Tissue Masses - Evaluation
Surgical Site Infection

Surgical Critical Care
Abdominal Compartment Syndrome
Anaphylaxis
ARDS and Respiratory Failure
Cardiac Arrhythmias - Common
Cardiac Failure
Cardiogenic Shock
Coagulopathy
Derangements of Electrolytes and Acid-Base Balance
Endocrine Dysfunction
Gastrointestinal Failure
Hepatic Failure and Hepatorenal Syndrome
Hypovolemic Shock
Neurogenic Shock
Neurologic Dysfunction
Pneumonia - Hospital-Acquired
Postoperative Delirium
Renal Failure
Septic Shock

Trauma
Aortic Injury
Bladder Injury
Burns - Electrical and Chemical
Burns - Flame and Scald
Cardiac Tamponade
Colon and Rectal Injury
Diaphragmatic Injury
Esophageal Injury
Frostbite and Hypothermia
Gastric Injury
Geriatric Trauma
Hemothorax - Injury-Related
Hepatic Injury
Initial Assessment and Management of Trauma
Laryngeal and Tracheal Injury
Myocardial Contusion
Pancreatic and Duodenal Injury
Pediatric Trauma
Pelvic Fractures
Pharyngeal and Cervical Esophageal Injury
Pneumothorax - Injury-Related
Pulmonary Injury
Renal Injury
Retroperitoneal Hematoma
Rib Fractures
Small Intestinal Injury
Splenetic Injury
Sternal Fractures
Trauma in Pregnancy
Ureteral Injury
Vascular Injury - Abdomen
Vascular Injury - Extremities
Vascular Injury - Neck
Vascular Injury - Thorax
Vascular - Arterial Disease
Acute Arterial Thrombosis
Acute Limb Ischemia
Aortic Thrombosis
Aortoiliac Disease
Cerebrovascular Disease
Compartment Syndromes
Diabetic Foot Infections
Peripheral Arterial Emboli
Peripheral Vascular Disease and Claudication

Vascular - Venous
Thrombophlebitis - Acute and Suppurative
Varicose Veins
Venous Stasis/Chronic Venous Insufficiency
Venous Thrombosis/Pulmonary Embolism

Vascular - Access
Vascular Access for Dialysis
Venous Access for Long-Term Therapy

Transplantation
Brain Death

Thoracic Surgery
Hemothorax
Pleural Effusion/Empyema
Pneumothorax

Pediatric Surgery
Abdominal Mass
Abdominal Pain - Acute
Gastrointestinal Bleeding - Lower
Hypertrophic Pyloric Stenosis
Inguinal Hernia
Intussusception
Malrotation
Meckel's Diverticulum
Tracheal/Esophageal Foreign Bodies
Umbilical Hernia

Plastic Surgery
Abdominal Wall Reconstruction

Genitourinary
Hydrocele

Gynecology
Ectopic Pregnancy
Ovarian Mass/Cyst - Incidental
Pelvic Inflammatory Disease

Head and Neck
Necrotizing Fasciitis
Upper Airway Obstruction

Nervous System
Pain, Acute - Management

Abdominopelvic Region
Abdominal Pain - Chronic
Ascites - Chylous
Bacterial Peritonitis - Spontaneous
Desmoids/Fibromatoses
Mesenteric Omentum
Peritoneal Neoplasms - Carcinomatosis
Peritoneal Neoplasms - Pseudomyxoma peritonei

Abdomen - Biliary
Ampullary Stenosis/Sphincter of Oddi Dysfunction
Bile Duct Neoplasms
Choledochal Cyst
Gallbladder Cancer
Primary Sclerosing Cholangitis
Abdomen - Liver
Budd-Chiari Syndrome
Cirrhosis/Portal Hypertension (Ascites)
Esophageal Varices
Hepatic Neoplasms - Benign
Hepatic Neoplasms - Malignant
Hepatic Neoplasms - Metastatic
Hepatitis - Viral (Occupational Risk)

Abdomen - Pancreas
Intraductal Papillary Mucinous Neoplasms
Pancreas Divisum
Pancreatic Neoplasms - Cystic
Pancreatic Neoplasms - Endocrine
Pancreatic Neoplasms - Exocrine
Pancreatitis - Autoimmune
Pancreatitis - Chronic (Including Hereditary Pancreatitis)/Pancreatic Insufficiency
Periampullary Neoplasms - Other

Abdomen - Spleen
Hemolytic Anemias
Hypersplenism - Secondary and Splenomegaly
Idiopathic Thrombocytopenic Purpura
Splenic Abscess, Cysts, and Neoplasms

Alimentary Tract - Esophagus
Esophageal Caustic Ingestion and Foreign Bodies
Esophageal Motility Disorders other than Achalasia
Esophageal Neoplasms - Benign
Esophageal Neoplasms - Malignant

Alimentary Tract - Stomach
Gastric Bezoars and Foreign Bodies
Gastroparesis
Morbid Obesity
Postgastrectomy Syndromes

Alimentary Tract - Small Intestine
Enteric Infections and Blind Loop Syndrome
Short Bowel Syndrome

Alimentary Tract - Large Intestine
Constipation - Functional
Irritable Bowel Syndrome

Alimentary Tract - Anorectal
Anal Dysplasia/Sexually Transmitted Diseases
Fecal Incontinence
Rectal Prolapse

Breast
Phyllodes Tumor
Postmastectomy Reconstruction Options

Endocrine
Multiple Endocrine Neoplasias
Parathyroid Cancer
Thyroiditis

Skin and Soft Tissue
Decubitus Ulcer
Lymphedema/Lymphangitis
Soft Tissue Sarcomas

Trauma
Animal and Insect Bites and Stings
Extremity Fractures and Traumatic Amputations
Head Injury - Penetrating and Closed
Human Bites
Nerve Injury - Neck
Smoke Inhalation Injury and Carbon Monoxide Poisoning
Spine Fracture
Sprains, Strains, and Dislocations
Tracheal and Bronchial Injury
Urethral Injury
Vascular - Arterial Disease
Aortic Dissection
Arterial Aneurysms - Aortic
Arterial Aneurysms - Peripheral
Arterial Aneurysms - Visceral
Chronic Visceral Disease
Hypercoagulable Syndromes
Nonatherosclerotic Occlusive Diseases
Renal Artery Disease
Thoracic Outlet Syndrome
Vascular Graft Infections

Transplantation
Donor Selection Criteria
Indications for Transplantation (Kidney, Liver, Pancreas)
Opportunistic Infections
Organ Preservation
Post-Transplant Malignancies

Thoracic Surgery
Chylothorax
Lung Cancer
Mediastinal Tumors and Cysts
Mediastinitis
Metastatic Tumors of the Lung
Superior Vena Cava Syndrome
Tracheoesophageal Fistula
Tracheoinnominate Fistula

Pediatric Surgery
Biliary Atresia
Choledochal Cysts
Congenital Aganglionosis (Hirschsprung’s Disease)
Congenital Diaphragmatic Hernia
Cryptorchidism
Duodenal Atresia/Stenosis
Esophageal Atresia/Tracheoesophageal Fistula
Gastrochisis/Omphalocele
Imperforate Anus
Intestinal Atresia/Mecoonium Ileus
Necrotizing Enterocolitis
Neuroblastoma
Wilms Tumor

Genitourinary
Genitourinary Neoplasms
Obstructive Uropathy and Urolithiasis
Ureteral Injury - iatrogenic

Gynecology
Endometriosis
Ovarian Neoplasm - Benign and Malignant
Uterine Neoplasms - Benign and Malignant

Head and Neck
Lymphoma/Hodgkin’s Disease
Oral Cavity/Pharynx, Laryngeal, and Salivary Gland Cancer

Nervous System
Pain, Chronic - Management
### OPERATIONS/PROCEDURES BY LEVEL

**ESSENTIAL—COMMON**

- **Abdomen - General**
  - Exploratory Laparotomy - Laparoscopic
  - Exploratory Laparotomy - Open
  - Peritoneal Dialysis Catheter Insertion
  - Peritoneal Lesion - Biopsy

- **Abdomen - Hernia**
  - Inguinal and Femoral Hernia - Laparoscopic Repair
  - Inguinal and Femoral Hernia - Open Repair
  - Ventral Hernia - Laparoscopic Repair
  - Ventral Hernia - Open Repair

- **Abdomen - Biliary**
  - Cholecystectomy with or without Cholangiography - Laparoscopic
  - Cholecystectomy with or without Cholangiography - Open

- **Abdomen - Liver**
  - Hepatic Biopsy - Laparoscopic
  - Hepatic Biopsy - Open

- **Abdomen - Spleen**
  - Splenectomy - Laparoscopic
  - Splenectomy - Open

- **Alimentary Tract - Esophagus**
  - Antireflux Procedure - Laparoscopic

- **Alimentary Tract - Stomach**
  - Gastrostomy - Open
  - Gastrostomy - Percutaneous Endoscopic

- **Alimentary Tract - Small Intestine**
  - Adhesiolysis - Laparoscopic
  - Adhesiolysis - Open
  - Feeding Jejunostomy - Laparoscopic
  - Feeding Jejunostomy - Open
  - Ileostomy
  - Ileostomy Closure
  - Small Intestinal Resection - Open

- **Alimentary Tract - Large Intestine**
  - Appendectomy - Laparoscopic
  - Appendectomy - Open
  - Colectomy, Partial - Laparoscopic
  - Colectomy, Partial - Open
  - Colostomy
  - Colostomy Closure

- **Alimentary Tract - Anorectal**
  - Anal Fistulotomy/Seton Placement
  - Anal Sphincterotomy - Internal
  - Anorectal Abscess - Drainage
  - Banding for Internal Hemorrhoids
  - Hemorrhoidectomy
  - Perianal Condylomas - Excision

- **Endoscopy**
  - Bronchoalveolar Lavage
  - Bronchoscopy
  - Colonoscopy
  - Esophagogastroduodenoscopy
  - Laryngoscopy
  - Proctoscopy and Sigmoidoscopy

- **Breast**
  - Axillary Sentinel Lymph Node Biopsy and Lymphadenectomy
  - Breast Biopsy with or without Needle Localization
  - Breast Cyst - Aspiration
  - Duct Excision
  - Mastectomy - Partial
  - Mastectomy - Simple, Modified Radical, and Radical

- **Endocrine**
  - Parathyroidectomy
  - Thyroidectomy - Partial or Total
ESSENTIAL – COMMON (CONT.)

Skin and Soft Tissue
Melanoma - Wide Local Excision
Pilonidal Cystectomy
Sentinel Lymph Node Biopsy for Melanoma
Skin/Soft Tissue Lesions - Excisional and Incisional Biopsy
Soft Tissue Infections - Incision, Drainage, Debridement

Surgical Critical Care
Airway Management/Ventilator Management
Arterial Catheter Placement
Central Venous Catheter Placement
Compartment Pressures (Abdomen, Extremity) - Measurement
Defibrillation and Cardioversion
Endotracheal Intubation
Enteral Feeding Tube Placement
Invasive Hemodynamic Monitoring
Oxygen Administration Devices
Paracentesis
Pulmonary Artery Catheter Placement
Thoracentesis
Ultrasound Use for Intravascular Access
Urinary Catheterization

Trauma
Focused Abdominal Sonography for Trauma (FAST)
Gastrointestinal Tract Injury - Operation
Temporary Closure of the Abdomen
Wounds, Major - Debride/Suture

Vascular - Arterial Disease
Amputations - Lower Extremity
Embolectomy/Thrombectomy - Arterial

Vascular - Venous
Vena Caval Filter - Insertion
Venous Insufficiency/Varicose Veins - Operation

Vascular - Access
Arteriovenous Graft/Fistula
Percutaneous Vascular Access
Venous Access Devices - Insertion

Thoracic Surgery
Chest Tube Placement and Management

Pediatric Surgery
Inguinal Hernia - Repair
Umbilical Hernia - Repair

Plastic Surgery
Skin Grafting

Head and Neck
Lymph Node Biopsy
Tracheostomy

ESSENTIAL – UNCOMMON

Abdomen - General
Intra-abdominal Abscess - Drainage

Abdomen - Hernia
Abdominal Wall Reconstruction - Components Separation
Miscellaneous Hernias - Repair

Abdomen - Biliary
Cholecystostomy
Choledochobiliary Anastomosis
Choledochoscopy
Common Bile Duct Exploration - Open

Abdomen - Liver
Hepatic Abscess - Drainage

Abdomen - Pancreas
Pancreatectomy - Distal
Pancreatic Debridement
Pancreatic Pseudocyst - Drainage
Abdomen - Spleen
Splencetomy/Splenorrhaphy - Partial

Alimentary Tract - Esophagus
Antireflux Procedure - Open
Cricopharyngeal Myotomy with Zenker’s Diverticulum - Excision
Esophageal Perforation - Repair/Resection
Paraesophageal Hernia - Laparoscopic Repair
Paraesophageal Hernia - Open Repair

Alimentary Tract - Stomach
Duodenal Perforation - Repair
Gastrectomy - Partial/Total
Vagotomy and Drainage

Alimentary Tract - Small Intestine
Small Intestinal Resection - Laparoscopic
Superior Mesenteric Artery Embolectomy/Thrombectomy

Alimentary Tract - Large Intestine
Colectomy - Subtotal (with ileorectal Anastomosis/Ileostomy)

Alimentary Tract - Anorectal
Anal Cancer - Excision

Endocrine
Ultrasound of the Thyroid

Surgical Critical Care
Damage Control Laparotomy and Management of the Open Abdomen

Trauma
Abdominal Aorta or Vena Cava Injury - Repair
Bladder Injury - Repair
Cardiac Injury - Repair
Carotid Artery Injury - Repair
Duodenal Trauma - Management
Esophageal Injury - Operation
Exploratory Laparoscopy
Exploratory Laparotomy
Fasciotomy for Injury
Hepatic Injury - Packing and Repair
Neck Exploration for Injury
Pancreatic Injury - Operation
Renal Injury - Repair/Resection
Splencetomy/Splenorrhaphy
Thoracoscopic for Management of Hemothorax
Truncal and Peripheral Vessels - Repair
Ureteral Injury - Repair

Vascular - Arterial Disease
Abdominal Aortic Aneurysm - Endovascular/Open Repair
Aortofemoral Bypass
Extra-anatomic Bypass
Femoral-popliteal Bypass
Infrapopliteal Bypass

Vascular - Venous
Sclerotherapy - Peripheral Vein

Thoracic Surgery
Exploratory Thoracotomy - Open and Thoracoscopic
Partial Pulmonary Resection - Open and Thoracoscopic
Pericardial Window for Drainage

Pediatric Surgery
Intussusception - Operation
Malrotation - Operation
Meckel's Diverticulum - Excision
Pyloromyotomy

Plastic Surgery
Complex Wound Closure
ESSENTIAL–UNCOMMON (cont.)

Genitourinary
Cystostomy
Hydrocelectomy
Nephrectomy
Orchiectomy
Ureteral Injury, Iatrogenic - Repair

Gynecology
Hysterectomy
Salpingo-Oophorectomy

Head and Neck
Cricothyroidotomy

Nervous System
Nerve Block - Digital
Nerve Block - Intercostal

COMPLEX

Abdomen - General
Pseudomyxoma - Operation

Abdomen - Hernia
Diaphragmatic Hernia - Repair

Abdomen - Biliary
Bile Duct Cancer - Operation
Bile Duct Injury - Acute Repair
Bile Duct Neoplasms - Operation
Common Bile Duct Exploration - Laparoscopic
Gallbladder Cancer - Operation
Transduodenal Sphincteroplasty
Ultrasound of the Biliary Tree

Abdomen - Liver
Hepatic Ultrasound - Intraoperative
Portal-Systemic Shunt
Segmentectomy/Lobectomy - Laparoscopic
Segmentectomy/Lobectomy - Open

Abdomen - Pancreas
Ampullary Resection for Tumor
Pancreatectomy - Frey and Beger Procedures
Pancreatectomy - Total
Pancreatic Ultrasound - Intraoperative
Pancreaticoduodenectomy
Pancreateojunostomy - Longitudinal

Alimentary Tract - Esophagus
Esophagectomy/Esophagogastrctomy
Esophagomyotomy (Heller)

Alimentary Tract - Stomach
Morbid Obesity - Operation
Postgastrectomy Syndromes - Revisional Procedures

Alimentary Tract - Small Intestine
Strictureplasty for Crohn’s Disease

Alimentary Tract - Large Intestine
Coloproctectomy - Total (with Ileorectal Pull-Through)

Alimentary Tract - Anorectal
Anorectal Fistulae - Complex Repair
Incontinence/Constipation - Operation
Rectal Cancer - Abdominoperineal Resection and Pelvic Exenteration
Rectal Cancer - Transanal Resection
Rectal Prolapse - Repair

Breast
Breast Biopsy - Image-Guided

Endocrine
Adrenalectomy
Skin and Soft Tissue
- Ilioinguinal-Femoral Lymphadenectomy
- Soft Tissue Sarcoma - Resection

Surgical Critical Care
- Cardiac Pacing
- Temporary Transvenous Pacemaker

Trauma
- Burn Debridement and Grafting of Major Burns
- Hepatic Injury - Resection
- Tendon - Repair

Vascular - Arterial Disease
- Arterial Occlusive Disease - Endarterectomy
- Carotid Endarterectomy
- Endovascular - Therapeutic, Including Thrombolysis
- Femoral Aneurysm - Repair
- Graft-enteric Fistula - Management
- Infrarenal and Aortoiliac Aneurysm - Repair
- Popliteal Aneurysm - Repair
- Pseudoaneurysm - Repair
- Suprarenal Abdominal Aortic Aneurysm - Repair
- Ultrasound in Diagnosis of Vascular Diseases
- Visceral Occlusive Disease - Operation

Transplantation
- En Bloc Abdominal Organ Retrieval
- Live Donor Hepatectomy
- Live Donor Nephrectomy
- Liver Transplant
- Pancreas Transplant
- Renal Transplant

Thoracic Surgery
- Empyema - Management
- Pleurodesis

Pediatric Surgery
- Antireflux Procedure
- Branchial Cleft Anomaly - Excision
- Chest Wall Deformity - Repair
- Diaphragmatic Hernia - Repair
- Esophageal Atresia/Tracheoesophageal Fistula - Repair
- Hirschsprung’s Disease - Operation
- Imperforate Anus - Operation
- Intestinal Atresia/Stenosis - Repair
- Meconium Ileus - Operation
- Necrotizing Enterocolitis - Operation
- Omphalocele/Gastrochisis - Repair
- Orchiopexy
- Thyroglossal Duct Cyst - Excision
- Wilms Tumor/Neuroblastoma - Excision

Gynecology
- Cesarean Section

Head and Neck
- Modified Neck Dissection
- Parotidectomy

Nervous System
- Nerve Block(s) - Peripheral other than Digital
Category 1: Anesthesia

- Anesthesia, General - Agents and Techniques
- Anesthesia, Regional and Local - Agents and Techniques
- Choice of Anesthesia
- Conscious Sedation - Agents and Techniques
- Intraoperative Monitoring and Common Intraoperative Problems
- Postoperative Pain Management

Category 2: Biostatistics and Evaluation of Evidence

- Clinical Trials
- Evaluating the Quality and Applicability of a Study
- How Data is Expressed and Summarized
- Levels of Evidence
- Outcomes
- Research Design
- Surveys and Qualitative Research
- Tests of Significance

Category 3: Fluids, Electrolytes and Acid-Base Balance

- Body Fluid Compartments and Fluid Homeostasis
- Hypocalcemia and Hypercalcemia
- Hypokalemia and Hyperkalemia
- Hyponatremia and Hypernatremia
- Magnesium and Phosphorous Disorders
- Normal Acid-Base Regulation and Acid-Base Disorders
Category 4: Geriatric Surgery and End-of-Life Care

- Advanced Directives, DNR Orders, and Power of Attorney
- Functional Decline of Aging
- Goal Setting with Elderly Patients and Families
- Medication and Dosing Issues in the Elderly
- Natural and Clinical Impact of Physiologic Effects Associated with Aging
- Palliative and Hospice Care
- Preoperative Evaluation of Geriatric Patients

Category 5: Immunology

- Components of the Immune System
- Immune Response to Injury and Infection
- Surgery and Surgical Conditions in Immunocompromised Hosts
- Transplant Immunology

Category 6: Infection and Antimicrobial Therapy

- Healthcare-Acquired Infections
- Host Defense and Infection
- Infection Control – Avoiding Risk to Self and Others
- Infections – Bacterial, Common
- Infections – Diagnostic Approach
- Infections – Fungal, Common
- Infections – Viral, Common
- Pathophysiology of Sepsis
- Principles of Antimicrobial Resistance
- Sepsis/SIRS Syndrome
- Surgical Site Infections and Prophylaxis
Category 7: Minimally Invasive Surgery – Principles

• MIS Equipment and Troubleshooting
• Physiologic Changes Associated with Pneumoperitoneum
• Principles and Techniques of Abdominal Access
• Robotic Surgery – Principles

Category 8: Nutrition and Metabolism

• Effect of Surgery, Illness, and Injury on Nutritional Requirements
• Nutrition, Enteral – Technique
• Nutrition, Parenteral – Technique
• Nutritional Assessment, Indications, and Choice of Route for Nutritional Support
• Nutritional Pharmacology and Immunonutrition
• Nutritional Requirements
• Nutritional Support – Long-Term

Category 9: Oncology and Tumor Biology

• Chemotherapy - Principles
• Epidemiology
• Genetic Susceptibility
• Immunology
• Molecular Biology
• Radiation Therapy - Principles
• Screening and Biomarkers

Category 10: Pharmacology

• Adverse Effects of Drugs Commonly Used in Surgical Patients
• Principles of Pharmacokinetics, Pharmacodynamics, and Monitoring of Drug Levels
Category 11: Preoperative Evaluation and Perioperative Care

- Common Postoperative Problems
- Evaluation of Surgical Risk
- Perioperative Management of the Patient on Steroids
- Perioperative Management of the Therapeutically Anticoagulated Patient
- Perioperative Prophylaxis for Venous Thromboembolism
- Preoperative Assessment and Management of Cardiac Risk
- Preoperative Assessment and Management of Coexisting Infection
- Preoperative Assessment and Management of Pulmonary Risk

Category 12: Transfusion and Disorders of Coagulation

- Evaluation of Ongoing Bleeding and Laboratory Assessment of Coagulation
- Inherited and Acquired Disorders of Coagulation
- Normal Mechanisms of Hemostasis and Coagulation
- Transfusion – Indications, Risks, Type and Crossmatch, and Component Therapy

Category 13: Wound Healing

- Disturbances of Wound Healing and Chronic Wounds
- Physiology of Normal Wound Healing
- Wound Care – Adjunctive
- Wound Care – Postoperative
- Wound Closure
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