In recent years, there has been a call for a better defined curriculum in general surgery residency training. An important starting point for curriculum development is to answer the question “What do we expect our residents to know and be able to do at the end of their training?” As described by the Accreditation Council for Graduate Medical Education, we expect our graduating residents to be competent in medical knowledge, patient care, and professionalism, among others. In 2004, the General Surgery Residency Committee of the American Board of Surgery (ABS) began to develop a curriculum in general surgery patient care by delineating the specific patient care competencies it expected of graduating general surgery residents. An expert consensus process was used to develop this document, with significant input from the Association of Program Directors in Surgery (APDS) as well as specialty groups.

The patient care competency was chosen as the subject for initial curriculum development because many organizations involved in surgical education felt that this area was the most in need of definition and attention. In the near future, there are plans to develop competency-based curricula in the areas of medical knowledge, professionalism, and others.

The enclosed outline of the patient care curriculum is the first step in curriculum development, not a full curriculum. A full curriculum includes educational content, teaching materials, instructional methods, and assessment. The Surgical Council on Resident Education (SCORE) and its member organizations are currently involved in developing a website for the delivery of instructional content and assessment for the patient care curriculum.

The following patient care curriculum outline has been approved as the basis for full curriculum development by SCORE and the ABS.
EXPLANATION OF THE PATIENT CARE CURRICULUM OUTLINE

This document contains a listing of the patient care topics to be included in a curriculum for a five-year general surgical residency training program. In addition, it specifies in general terms the depth and breadth of training that is expected for each.

This document is not a “curriculum”—it is the basis for a curriculum. SCORE, with the extensive involvement of the APDS Curriculum Committee, is in the process of developing specific learning objectives for each topic. Then instructional material can be identified or developed to support the teaching of each topic. It will also be necessary to develop assessment tools 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, there will be a complete curriculum.

This document should not be viewed as static. A mechanism will be developed to review it on an annual basis in order to introduce new topics as necessary, delete obsolete topics, or change the depth and breadth of teaching of existing topics.

Classification System

The curriculum topics are organized into 28 organ system-based categories. Within each category are diseases/conditions as well as operations/procedures.

The topics are stratified as follows:

DISEASES/CONDITIONS

Two levels:

- **BROAD** — a graduate should be able to care for all aspects of disease and provide comprehensive management.

- **FOCUSED** — a graduate 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 (and should be attainable primarily by case volume).

• **ESSENTIAL – UNCOMMON** – rare, often urgent, operations seen in general surgery practice and not typically done in significant numbers by trainees; specific procedure competency required by end of training (but cannot 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 in residency is required but not competence in individual procedures. Some residency programs may provide sufficient experience for competence in some specific procedures.
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**DISEASES BY LEVEL**

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**OPERATIONS BY LEVEL**

Essential – Common .................................. 51-52
Essential – Uncommon .................................. 52-53
Complex ............................................. 53-56
THE CURRICULUM OUTLINE

CATEGORY 1: ABDOMEN — GENERAL

DISEASES/CONDITIONS

BROAD
• Acute abdominal pain
• Intra-abdominal abscess
• Rectus sheath hematoma
• Mesenteric cyst

FOCUSED
• Chronic abdominal pain
• Peritoneal neoplasms
  - Carcinomatosis
  - Pseudomyxoma peritonei
• Spontaneous bacterial peritonitis
• Desmoid tumors
• Chylous ascites
• Retroperitoneal fibrosis

OPERATIONS/PROCEDURES

ESSENTIAL — COMMON
• Exploratory laparotomy — open
• Exploratory laparotomy — laparoscopic

ESSENTIAL — UNCOMMON
• Open drainage abdominal abscess

COMPLEX
• Retroperitoneal lymph node dissection — open
• Retroperitoneal lymph node dissection — laparoscopic
• Operation for pseudomyxoma
CATEGORY 2: ABDOMEN — HERNIA

DISEASES/CONDITIONS

BROAD
- Inguinal hernia
- Femoral hernia
- Ventral hernia
- Miscellaneous hernias

OPERATIONS/PROCEDURES

ESSENTIAL — COMMON
- Repair inguinal/femoral hernia — open
- Repair inguinal/femoral hernia — laparoscopic
- Repair ventral hernia — open
- Repair ventral hernias — laparoscopic

ESSENTIAL — UNCOMMON
- Repair miscellaneous hernias

COMPLEX
- Component separation abdominal wall reconstruction
CATEGORY 3: ABDOMEN – BILIARY

DISEASES/CONDITIONS

BROAD

• Jaundice
• Cholangitis
• Gallstone disease
  - Acute cholecystitis
  - Chronic cholecystitis
  - Choledocholithiasis
  - Biliary pancreatitis
  - Gallstone ileus
• Acalculous cholecystitis and biliary dyskinesia
• Gallbladder neoplasms
  - Polyps
  - Cancer (incidental)
• Iatrogenic bile duct injury

FOCUSED

• Gallbladder cancer
• Cancer of the bile ducts
• Choledochal cyst
• Sclerosing cholangitis
• Ampullary stenosis/sphincter of Oddi dysfunction

OPERATIONS/PROCEDURES

ESSENTIAL – COMMON

• Cholecystectomy with/without cholangiogram
  – open
• Cholecystectomy with/without cholangiogram
  – laparoscopic

ESSENTIAL – UNCOMMON

• Cholecystostomy
• Common bile duct exploration - open
• Choledochoscopy
• Choledochoenteric anastomosis
• Operation for gallbladder cancer (when found incidentally)
• Repair acute common bile duct injury

COMPLEX

• Laparoscopic common bile duct exploration
• Operation for gallbladder cancer (planned)
• Operation for bile duct cancer
• Excision choledochal cyst
• Transduodenal sphincteroplasty
**CATEGORY 4: ABDOMEN — LIVER**

**DISEASES/CONDITIONS**

**BROAD**
- Liver mass – evaluation
- Hepatic abscess

**FOCUSED**
- Benign neoplasms
  - Hepatic adenoma
  - Focal nodular hyperplasia
  - Hemangioma
  - Miscellaneous
- Malignant neoplasms
  - Hepatocellular carcinoma
  - Cholangiocarcinoma
  - Metastatic
  - Miscellaneous
- Cirrhosis and portal hypertension
  - Ascites
  - Bleeding esophageal varices
  - Hepatic failure and encephalopathy
  - Hepatorenal syndrome
- Viral hepatitis (occupational risk)

**OPERATIONS/PROCEDURES**

**ESSENTIAL — COMMON**
- Needle/wedge biopsy – open
- Needle/wedge biopsy – laparoscopic

**ESSENTIAL — UNCOMMON**
- Drainage liver abscess

**COMPLEX**
- Segmentectomy/lobectomy – open
- Segmentectomy/lobectomy – laparoscopic
- Intraoperative ultrasound of liver
- Portal-systemic shunt
**CATEGORY 5: ABDOMEN — PANCREAS**

**DISEASES/CONDITIONS**

**BROAD**
- Acute pancreatitis
  - Pancreatic necrosis
  - Pancreatic abscess
  - Pseudocyst

**FOCUSED**
- Autoimmune pancreatitis
- Chronic pancreatitis, including hereditary pancreatitis
- Pancreatic insufficiency
- Exocrine neoplasms
  - Ductal adenocarcinoma
  - Acinar cell carcinoma
  - Cystic neoplasms
  - Intraductal papillary mucinous neoplasms
- Other periampullary neoplasms
- Endocrine neoplasms
  - Gastrinoma and Z-E syndrome
  - Insulinoma
  - VIPoma
  - Glucagonoma
  - Somatostatinoma
  - Nonfunctional tumors
- Lymphoma of pancreas

**OPERATIONS/PROCEDURES**

**COMPLEX**
- Pancreaticoduodenectomy
- Total pancreatectomy
- Ampullary resection for tumor
- Distal pancreatectomy
- Longitudinal pancreaticojejunostomy
- Frey procedure
- Beger procedure
- Intraoperative pancreatic ultrasound
- Pancreatic debridement for necrosis — open
- Pancreatic debridement for necrosis — laparoscopic/endoscopic
- Drainage pancreatic pseudocyst
**CATEGORY 6: ABDOMEN — SPLEEN**

**DISEASES/CONDITIONS**

*BROAD*
- Postsplenectomy sepsis

*FOCUSED*
- Hemolytic anemias
- Idiopathic thrombocytopenic purpura
- Secondary hypersplenism and splenomegaly
- Neoplasms of spleen
- Splenic cysts

**OPERATIONS/PROCEDURES**

*ESSENTIAL — COMMON*
- Splenectomy for disease — open
- Splenectomy for disease — laparoscopic

*ESSENTIAL — UNCOMMON*
- Partial splenectomy/splenorrhaphy
DISEASES/CONDITIONS

BROAD
• Dysphagia
• Gastroesophageal reflux and Barrett’s esophagus
• Hiatal hernia
• Esophageal perforation
  - Spontaneous
  - Iatrogenic
• Mallory-Weiss syndrome

FOCUSED
• Achalasia
• Diverticula
  - Zenker’s
  - Epiphrenic
• Foreign bodies
• Schatzki’s ring
• Chemical burns (ingestion)
• Benign neoplasms
• Malignant neoplasms
  - Adenocarcinoma
  - Squamous cell carcinoma
• Other motility disorders
  - Diffuse esophageal spasm
  - Nutcracker esophagus
  - Presbyesophagus
  - Scleroderma connective tissue disorders

OPERATIONS/PROCEDURES

ESSENTIAL – COMMON
• Laparoscopic antireflux procedure

ESSENTIAL – UNCOMMON
• Open antireflux procedure
• Open repair of paraesophageal hernia
• Laparoscopic repair of paraesophageal hernia
• Repair/resection of perforated esophagus

COMPLEX
• Esophagectomy, total
• Esophagogastrectomy
• Cricopharyngeal myotomy with excision
  Zenker’s diverticulum
• Heller myotomy – open
• Heller myotomy – laparoscopic
• Collis gastroplasty
CATEGORY 8: ALIMENTARY TRACT — STOMACH

DISEASES/CONDITIONS

BROAD
• Upper GI bleeding
• Peptic ulcer disease
  - H. pylori infection
  - Duodenal ulcer
  - Gastric ulcer
  - Bleeding
  - Perforation
  - Obstruction
• Gastric neoplasms
  - Polyps
  - Carcinoma
  - Lymphoma
  - Carcinoid
• Stress gastritis

FOCUSED
• Morbid obesity
• Bezoars and foreign bodies
• Gastroparesis
• Postgastrectomy syndromes

OPERATIONS/PROCEDURES

ESSENTIAL – COMMON
• Percutaneous endoscopic gastrostomy
• Open gastrostomy

ESSENTIAL – UNCOMMON
• Partial/total gastrectomy
• Repair duodenal perforation
• Truncal vagotomy and drainage

COMPLEX
• Operation for morbid obesity – open
• Operation for morbid obesity – laparoscopic
• Laparoscopic gastric resection
• Proximal gastric vagotomy
• Revisional procedures for postgastrectomy syndromes
CATEGORY 9: ALIMENTARY TRACT — SMALL INTESTINE

DISEASES/CONDITIONS

BROAD
• Small bowel obstruction and ileus
• Meckel’s diverticulum
• Crohn’s disease (emergent management)
• Radiation enteritis
• Small bowel neoplasms
  - Polyps
  - Adenocarcinoma
  - Lymphoma
  - Carcinoid
  - GISTs
• Intussusception
• Malrotation
• Pneumatosis
• Acute mesenteric ischemia (arterial/venous/nonocclusive)

FOCUSED
• Short bowel syndrome
• Enteric infections and blind loop syndrome

OPERATIONS/PROCEDURES

ESSENTIAL — COMMON
• Small bowel resection – open
• Adhesiolysis – open
• Adhesiolysis – laparoscopic
• Ileostomy
• Ileostomy closure
• Feeding jejunostomy – open
• Feeding jejunostomy – laparoscopic

ESSENTIAL — UNCOMMON
• Superior mesenteric artery embolectomy/thrombectomy

COMPLEX
• Strictureplasty for Crohn’s disease
CATEGORY 10: ALIMENTARY TRACT – LARGE INTESTINE

DISEASES/CONDITIONS

BROAD

• Lower GI bleeding
• Large bowel obstruction
• Acute appendicitis
• Diverticular disease
  - Diverticulitis
  - Diverticular bleeding
  - Fistulae
• Volvulus
• Colonic neoplasms
  - Polyps
  - Colorectal cancer
  - Miscellaneous
• Neoplasms of appendix
• Inflammatory bowel disease (emergent management)
  - Ulcerative colitis
  - Indeterminate colitis
• Ischemic colitis
• Antibiotic-induced colitis

FOCUSED

• Endometriosis
• Irritable bowel syndrome
• Functional constipation
• Infectious colitis

OPERATIONS/PROCEDURES

ESSENTIAL – COMMON

• Appendectomy – open
• Appendectomy – laparoscopic
• Partial colectomy – open
• Partial colectomy – laparoscopic
• Colostomy
• Colostomy closure
ESSENTIAL — UNCOMMON

• Subtotal colectomy with ileorectal anastomosis/ileostomy

COMPLEX

• Total proctocolectomy and ileoanal pull-through
CATEGORY 11: ALIMENTARY TRACT – ANORECTAL

DISEASES/CONDITIONS

BROAD
• Hemorrhoids
• Anal fissure
• Anorectal abscess and fistulae
• Anal cancer
• Rectal cancer

FOCUSED
• Pelvic floor dysfunction
• Incontinence
• Anal dysplasia/sexually-transmitted disease
• Rectal prolapse

OPERATIONS/PROCEDURES

ESSENTIAL – COMMON
• Banding for internal hemorrhoids
• Hemorrhoidectomy
• Subcutaneous lateral internal sphincterotomy
• Drainage anorectal abscess
• Anal fistulotomy/seton placement

ESSENTIAL – UNCOMMON
• Excision of anal cancer

COMPLEX
• Stapled hemorrhoidectomy
• Repair complex anorectal fistulae
• Operation for incontinence/constipation
• Transabdominal operation for rectal prolapse
  – open
• Transabdominal operation for rectal prolapse
  – laparoscopic
• Perineal operation for rectal prolapse
• Operations for rectal cancer
  - Transanal resection
  - Abdominoperineal resection
  - Pelvic exenteration
OPERATIONS/PROCEDURES

**ESSENTIAL — COMMON**
- Esophagogastroduodenoscopy
- Proctoscopy
- Colonoscopy with or without biopsy/polypectomy
- Bronchoscopy
- Laryngoscopy

**COMPLEX**
- Mediastinoscopy
- Cystoscopy
- ERCP
**Category 13: Breast**

**Diseases/Conditions**

**Broad**
- Breast mass
- Nipple discharge
- Benign disease
  - Fibroadenoma
  - Fibrocystic disease
  - Fat necrosis
  - Mastitis and abscess
  - Galactocele
  - Mondor’s disease
  - Intraductal papilloma
  - Gynecomastia
  - Invasive ductal carcinoma
  - Ductal carcinoma in situ
  - Invasive lobular carcinoma
  - Lobular carcinoma in situ
  - Inflammatory cancer
  - Paget’s disease of the nipple
  - Cystosarcoma phyllodes
- Breast cancer during pregnancy and lactation
- Occult breast cancer with axillary metastasis
- Male breast cancer

**Operations/Procedures**

**Essential — Common**
- Aspiration of breast cyst
- Duct excision
- Breast biopsy with or without needle localization
- Lumpectomy/quadrantectomy
- Simple mastectomy
- Skin-sparing mastectomy
- Axillary dissection
- Sentinel lymph node biopsy
- Modified radical mastectomy

**Essential — Uncommon**
- Radical mastectomy

**Complex**
- Stereotactic breast biopsy
DISEASES/CONDITIONS

BROAD
- Thyroid nodule(s)
- Hypothyroidism (postoperative)
- Papillary carcinoma of thyroid
- Follicular carcinoma of thyroid
- Hypercalcemia
- Hypocalcemia
- Primary hyperparathyroidism
- Addisonian crisis
- Hyperthyroidism

FOCUSED
- Thyroiditis
- Uncommon thyroid cancers
  - Medullary
  - Hurthle cell
  - Anaplastic
- Hyperparathyroidism
  - Secondary
  - Tertiary
- Recurrent or persistent hyperparathyroidism
- Parathyroid carcinoma
- Multiple endocrine neoplasias
  - MENI
  - MENIIA
  - MENIIB
- Incidental adrenal mass
- Pheochromocytoma
- Primary hyperaldosteronism
- Hypercortisolism
  - Cushing’s syndrome
  - Cushing’s disease
- Adrenocortical carcinoma

OPERATIONS/PROCEDURES

ESSENTIAL – COMMON
- Partial or total thyroidectomy
- Parathyroidectomy

COMPLEX
- Adrenalectomy – open
- Adrenalectomy – laparoscopic
**Category 15: Skin and Soft Tissue**

**Diseases/Conditions**

**Broad**
- Nevi
- Melanoma
- Squamous cell carcinoma
- Basal cell carcinoma
- Evaluation of soft tissue masses
- Epidermal cyst
- Tumors of dermal adenexae
  - Apocrine tumor
  - Eccrine tumor
  - Sebaceous tumor
  - Merkel cell tumor
- Dermatofibrosarcoma
- Skin and soft tissue infections
  - Hidradenitis
  - Cellulitis
  - Necrotizing fasciitis
- Hand infections
  - Paronychia
  - Felon
- Wound infections
- Pilonidal cyst and sinus

**Focused**
- Decubitus ulcer
- Soft tissue sarcomas
  - Extremity
  - Retroperitoneal
- Lymphedema

**Operations/Procedures**

**Essential – Common**
- Biopsy (excisional and incisional) skin/soft tissue lesions
- Incision, drainage, debridement for soft tissue infections
- Pilonidal cystectomy

**Essential – Uncommon**
- Wide local excision melanoma
• Sentinel lymph node biopsy for melanoma

**COMPLEX**

• Ilioinguinal – femoral lymphadenectomy
• Major resection for soft tissue sarcoma
DISEASES/CONDITIONS

BROAD (NOT AS BROAD AS SPECIALIST)

• Shock
  - Hypovolemic
  - Septic
  - Cardiogenic
  - Neurogenic

• Systems dysfunction and failure
  - Respiratory
  - Cardiac
  - Gastrointestinal
  - Hepatic
  - Renal
  - Coagulopathy
  - Neurologic
  - Endocrine

• Derangements of electrolytes and acid-base

• Anaphylaxis

• Pneumonia – hospital acquired

OPERATIONS/PROCEDURES

ESSENTIAL – COMMON

• Arterial line placement
• Central venous line placement
• Swan Ganz catheter placement
• Endotracheal intubation
**CATEGORY 17: TRAUMA**

**DISEASES/CONDITIONS**

**BROAD**

- Blunt trauma
- Penetrating trauma
- Neck injuries
  - Vascular
  - Trachea/Larynx
  - Pharynx/esophagus
  - Nerve
- Chest injuries
  - Rib fractures
  - Sternum fractures
  - Flail chest
  - Pneumothorax
  - Hemotorax
  - Pulmonary contusion
  - Pulmonary laceration
  - Myocardial contusion
  - Cardiac tamponade
  - Esophageal injury
- Abdominal injuries
  - Diaphragm
  - Spleen
  - Liver
  - Stomach
  - Duodenum
  - Pancreas
  - Small intestine
  - Colon and rectum
- Retroperitoneal injuries
  - Retroperitoneal hematoma
  - Pelvic fractures
  - Renal injuries
  - Bladder injuries
  - Ureteral injuries
- Vascular injuries
  - Head/neck
  - Thorax
  - Abdomen
  - Extremity
• Pediatric trauma
• Geriatric trauma
• Trauma in pregnancy

FOCUSED
• Head injury
  - Closed
  - Penetrating
• Tracheobronchial injuries
• Aortic Injuries
• Urethral injuries
• Orthopedic and spinal injuries
  - Spine fracture
  - Pelvic fracture
  - Extremity fractures
  - Dislocations
  - Sprains and strains
  - Mangle and traumatic amputation
• Envenomation
  - Snakes and lizards
  - Spiders
  - Hymenoptera
  - Scorpions
• Animal and human bites
• Environmental injuries
  - Hypothermia
  - Frostbite
• Burns
  - Flame burns
  - Scald burns
  - Electrical burns
  - Chemical burns
  - Inhalation injury
  - Carbon monoxide poisoning

OPERATIONS/PROCEDURES
ESSENTIAL – UNCOMMON
• Management of esophageal trauma
• Management of gastric trauma
• Management of duodenal trauma
• Management of small bowel trauma
• Management of colon trauma

- 27 -
• Neck exploration for trauma
• Exploratory thoracotomy – open
• Exploratory laparotomy – open
• Exploratory laparotomy – laparoscopic
• Splenectomy/splenorrhaphy
• Repair hepatic lacerations
• Drainage pancreatic injury
• Debride/suture major wounds
• Repair/resection for kidney trauma
• Repair ureteral injury
• Repair bladder injury
• Repair of carotid artery injury
• Repair of abdominal aorta or vena cava injury
• Repair peripheral vessels
• Fasciotomy for injury
• Repair cardiac injury

**COMPLEX**
• Burn debridement or grafting
• Placement of intracranial pressure monitor
• Reduction and stabilization of maxillofacial fracture
• Repair of tendon or nerve
• Hepatic resection for injury
• Resection for pancreatic injury
• Closed reduction of fracture
• Open reduction of open/closed fracture
• Debridement and reduction of open fracture
• Repair of thoracic aorta, innominate, subclavian injury
DISEASES/CONDITIONS

BROAD
- Acute limb ischemia
- Thromboembolic disease
  - Peripheral arterial emboli
  - Acute arterial thrombosis
- Compartment syndromes
- Diabetic foot infections

FOCUSED
- Arterial occlusive disease
  - Cerebrovascular occlusive disease
  - Aortoiliac disease
  - Chronic visceral occlusive disease
  - Renal artery occlusive disease
  - Femoropopliteal occlusive disease
  - Infrapopliteal occlusive disease
  - Upper extremity occlusive disease
  - Buerger disease
  - Fibromuscular dysplasia
  - Cystic medial necrosis
  - Behcet disease
- Arterial aneurysms
  - Aortic
  - Visceral
  - Peripheral arterial
- Aortic dissection
- Claudication
- Hypercoagulable syndromes
- Carotid body tumors
- Vascular graft infections
- Aortic thrombosis
- Thoracic outlet syndrome

OPERATIONS/PROCEDURES

ESSENTIAL – UNCOMMON
- Embolectomy/thrombectomy artery
- Amputations
  - Above knee
- Below knee
- Toe

**COMPLEX**

- Arterial occlusive disease
  - Aorto-iliac/femoral bypass
  - Ilio-iliac/femoral bypass
  - Femoral-popliteal bypass
  - Profunda endarterectomy
  - Infrapopliteal bypass
  - Other endarterectomy
  - Composite leg bypass graft
  - Revise/re-do lower extremity bypass
  - Arm bypass, endarterectomy, repair
  - Celiac/SMA endarterectomy/bypass
  - Renal endarterectomy/bypass
  - Femoral-femoral bypass
  - Axillo-femoral bypass
  - Axillo-popliteal-tibial bypass

- Amputation
  - Transmetatarsal
  - Upper extremity
  - Disarticulation

- Arterial aneurysm
  - Infrarenal aortoiliac
  - Femoral aneurysm
  - Popliteal aneurysm
  - Suprarenal abdominal aortic
  - Thoracoabdominal
  - Thoracic aortic

- Cerebrovascular disease
  - Carotid endarterectomy
  - Reoperative carotid surgery
  - Excise carotid body tumor
  - Direct repair aortic arch branches
  - Vertebral artery operation

- Endovascular
  - Vascular ultrasound
  - Angioscopy
  - Balloon angioplasty
  - Transcatheter stent
  - Other endovascular graft
  - Endovascular repair aortic aneurysm
- Endovascular repair other aneurysm
- Thrombolysis

• Miscellaneous
  - Pseudoaneurysm repair/injection
  - Explore post-op bleed, thrombosis, infection
  - Graft thrombectomy/revision
  - Excise infected vascular graft
  - Repair graft-enteric fistula
  - Sympathectomy
  - Harvest arm vein
  - Thoracic outlet decompression
CATEGORY 19: VASCULAR — VENOUS

DISEASES/CONDITIONS

BROAD
• Venous thrombosis/embolism
• Thrombophlebitis, including suppurative
• Venous stasis and chronic venous insufficiency
• Varicose veins

OPERATIONS/PROCEDURES

ESSENTIAL — COMMON
• Operation for varicose veins
• Sclerotherapy, peripheral vein
• Insertion vena caval filter

COMPLEX
• Venous embolectomy/thrombectomy
• Venous reconstruction
• Non-reconstructive venous ulcer operation
• Repair A-V malformation
CATEGORY 20: VASCULAR — ACCESS

DISEASES/CONDITIONS

BROAD

• Vascular access for dialysis

OPERATIONS/PROCEDURES

ESSENTIAL — COMMON

• Percutaneous vascular access
• A-V graft/fistula
• Revision A-V access
DISEASES/CONDITIONS

FOCUSED

• Immunosuppression

OPERATIONS/PROCEDURES

COMPLEX

• Donor nephrectomy
• Donor hepatectomy
• Renal transplant
• Renal-pancreas transplant
• En bloc abdominal organ retrieval
• Liver transplant
• Pancreas transplant
DISEASES/CONDITIONS

BROAD
• Pneumothorax
• Hemothorax
• Pleural effusion/empyema
• Cardiac tamponade

FOCUSED
• Mediastinitis
• Chylothorax
• Lung cancer
  - Adenocarcinoma
  - Undifferentiated carcinoma
  - Small cell
  - Large cell
• Soft tissue sarcomas of chest wall
• Mediastinal tumors and cysts
  - Thymoma
  - Teratoma
  - Neurogenic tumor
  - Enteric cyst
  - Pericardial cyst
  - Bronchogenic cyst
• Superior vena cava syndrome
• Tracheoinnominate fistula
• Tracheoesophageal fistula
• Valvular heart disease
• Congestive heart failure
• Endocarditis
• Coronary artery disease
• Ventricular aneurysms
• Cardiomyopathy
• Pericarditis

OPERATIONS/PROCEDURES

ESSENTIAL — COMMON
• Chest tube placement

ESSENTIAL — UNCOMMON
• Exploratory thoracotomy
• Pericardial window for drainage


COMPLEX

• Thoracoscopy with or without biopsy
• Thoracoscopic pleurodesis
• Thoracoscopic esophagomyotomy (Heller)
• Excision mediastinal tumor
• Transthoracic repair diaphragmatic hernia
• Open drainage of empyema
• Pneumonectomy
• Cardiac procedures
• Pericardiectomy
• Pacemaker insertion
CATEGORY 23: PEDIATRIC SURGERY

DISEASES/CONDITIONS

BROAD
- Umbilical hernia
- Inguinal hernia
- Malrotation
- Hypertrophic pyloric stenosis
- Intussusception
- Meckel’s diverticulum

FOCUSED
- Gastroschisis
- Omphalocele
- Esophageal atresia
- Tracheoesophageal fistula
- Foreign bodies of the trachea/esophagus
- Congenital diaphragmatic hernia
- Duodenal atresia/stenosis
- Pancreas divisum
- Intestinal atresia and meconium ileus
- Imperforate anus
- Necrotizing enterocolitis
- Congenital agangliosis (Hirschsprung’s disease)
- Biliary atresia
- Choledochal cysts
- Cryptorchidism
- Wilms tumor
- Neuroblastoma

OPERATIONS/PROCEDURES

ESSENTIAL — COMMON
- Inguinal hernia repair
- Umbilical hernia repair

ESSENTIAL — UNCOMMON
- Pyloromyotomy
- Emergency operation for malrotation
- Emergency operation for intussusception
• Excise branchial cleft anomaly
• Excise thyroglossal duct cyst
• Orchiopexy
• Antireflux procedure – open
• Antireflux procedure – laparoscopic
• Repair intestinal atresia/stenosis
• Repair diaphragmatic hernia
• Repair omphalocele/gastroschisis
• Procedure for meconium ileus/necrotizing enterocolitis
• Excision Wilms tumor/neuroblastoma
• Operation for Hirschsprung’s/imperforate anus
• Repair esophageal atresia/tracheoesophageal fistula
• Repair deformity chest wall
DISEASES/CONDITIONS

FOCUSED
- Aesthetic surgery
  - Abdomen
  - Breast
- Postmastectomy reconstruction
- Abdominal wall reconstruction

OPERATIONS/PROCEDURES

ESSENTIAL – COMMON
- Skin grafting

COMPLEX
- Revision of scars and resultant deformities
- Composite tissue transfer
- Major reconstructive procedures
DISEASES/CONDITIONS

FOCUSED
• Ureteral injury (iatrogenic)
• Bladder dysfunction
  - Neurogenic
  - Urinary incontinence
• Obstructive uropathy
• Impotence
• Neoplasms
  - Bladder
  - Ureter
  - Renal cell carcinoma
  - Prostate
  - Testicle
• Stone disease

OPERATIONS/PROCEDURES

ESSENTIAL – UNCOMMON
• Hydrocelectomy
• Nephrectomy
• Orchiectomy
• Cystostomy
• Repair iatrogenic ureteral injury

COMPLEX
• Prostatectomy
• Ileal urinary conduit
• Cystectomy
DISEASES/CONDITIONS

BROAD
• Ectopic pregnancy
• Pelvic inflammatory disease
• Incidental ovarian mass/cyst

FOCUSED
• Endometriosis
• Ovarian neoplasms
  - Benign
  - Malignant
• Uterine neoplasms
  - Benign
  - Malignant
• Cystocele
• Rectocele

OPERATIONS/PROCEDURES

ESSENTIAL — UNCOMMON
• Hysterectomy
• Salpingo-oophorectomy

COMPLEX
• Caesarian section
• Repair cystocele
• Repair rectocele
CATEGORY 27: HEAD AND NECK

DISEASES/CONDITIONS

BROAD
• Cervical lymphadenopathy
• Upper airway obstruction

FOCUSED
• Epistaxis
• Mucosal cancers of the oral cavity
• Mucosal cancers of the pharynx
• Mucosal cancers of the larynx
• Salivary gland tumors
  - Parotid gland
  - Submandibular gland

OPERATIONS/PROCEDURES

ESSENTIAL − COMMON
• Tracheostomy

ESSENTIAL − UNCOMMON
• Cricothyroidotomy

COMPLEX
• Resection of lip/tongue lesions
• Parotidectomy
• Modified radical neck dissection
CATEGORY 28: NERVOUS SYSTEM

DISEASES/CONDITIONS

BROAD
• Management of acute pain

FOCUSED
• Management of chronic pain

OPERATIONS/PROCEDURES

ESSENTIAL – UNCOMMON
• Digital nerve block

COMPLEX
• Placement of indwelling epidural catheter
• Placement of nerve stimulator for chronic pain
• Celiac plexus blockade – percutaneous or endoscopic
• Thoracic splanchnicectomy
• Peripheral nerve block(s) other than digital
DISEASES/CONDITIONS BY LEVEL

**BROAD**

**Abdomen - General**
- Acute abdominal pain
- Intra-abdominal abscess
- Rectus sheath hematoma
- Mesenteric cyst

**Abdomen - Hernia**
- Inguinal hernia
- Femoral hernia
- Ventral hernia
- Miscellaneous hernias

**Abdomen - Biliary**
- Jaundice
- Cholangitis
- Gallstone disease [Acute cholecystitis]
- Gallstone disease [Chronic cholecystitis]
- Gallstone disease [Choledocholithiasis]
- Gallstone disease [Biliary pancreatitis]
- Gallstone disease [Gallstone ileus]
- Acute cholecystitis and biliary dyskinesia
- Gallbladder neoplasms [Polyps]
- Gallbladder neoplasms [Cancer (incidental)]
- Iatrogenic bile duct injury

**Abdomen - Liver**
- Liver mass - evaluation
- Hepatic abscess

**Abdomen - Pancreas**
- Acute pancreatitis [Pancreatic necrosis]
- Acute pancreatitis [Pancreatic abscess]
- Acute pancreatitis [Pseudocyst]

**Abdomen - Spleen**
- Postsplenectomy sepsis

**Alimentary Tract - Esophagus**
- Dysphagia
- Gastroesophageal reflux and Barrett’s esophagus
- Hiatal hernia
- Esophageal perforation [Spontaneous]
- Esophageal perforation [Iatrogenic]
- Mallory-Weiss syndrome

**Alimentary Tract - Stomach**
- Upper Gl bleeding
- Peptic ulcer disease [H. pylori infection]
- Peptic ulcer disease [Duodenal ulcer]
- Peptic ulcer disease [Gastric ulcer]
- Peptic ulcer disease [Bleeding]
- Peptic ulcer disease [Perforation]
- Peptic ulcer disease [Obstruction]
- Gastric neoplasms [Polyps]
- Gastric neoplasms [Carcinoma]
- Gastric neoplasms [Lymphoma]
- Gastric neoplasms [Carcinoid]
- Stress gastritis

**Alimentary Tract - Small Intestine**
- Small bowel obstruction and ileus
- Meckel’s diverticulum
- Crohn’s disease (emergent management)
- Radiation enteritis
- Small bowel neoplasms [Polyps]
- Small bowel neoplasms [Adenocarcinoma]
- Small bowel neoplasms [Lymphoma]
- Small bowel neoplasms [Carcinoid]
- Small bowel neoplasms [GISTs]
- Intussusception
- Malrotation
Pneumatosis

Acute mesentric ischemia (arterial/venous/nonocclusive)

**Alimentary Tract - Large Intestine**

Lower GI bleeding
Large bowel obstruction
Acute appendicitis
Diverticular disease [Diverticulitis]
Diverticular disease [Diverticular bleeding]
Diverticular disease [Fistulae]
Volvulus
Colonic neoplasms [Polyps]
Colonic neoplasms [Colorectal cancer]
Colonic neoplasms [Miscellaneous]
Neoplasms of appendix
Inflammatory bowel disease (emergent management)
[Ulcerative colitis]
Inflammatory bowel disease (emergent management)
[Indeterminate colitis]
Ischemic colitis
Antibiotic-induced colitis

**Alimentary Tract - Anorectal**

Hemorrhoids
Anal fissure
Anorectal abscess and fistulae
Anal cancer
Rectal cancer

**Breast**

Breast mass
Nipple discharge
Benign disease [Fibroadenoma]
Benign disease [Fibrocystic disease]
Benign disease [Fat necrosis]
Benign disease [Mastitis and abscess]
Benign disease [Galactocele]
Benign disease [Mondor’s disease]
Benign disease [Intraductal papilloma]
Benign disease [Gynecomastia]
Breast cancer [Invasive ductal carcinoma]
Breast cancer [Ductal carcinoma in situ]
Breast cancer [Invasive lobular carcinoma]
Breast cancer [Lobular carcinoma in situ]
Breast cancer [Inflammatory cancer]
Breast cancer [Paget’s disease of the nipple]
Breast cancer [Cystosarcoma phylloides]
Breast cancer during pregnancy and lactation
Occult breast cancer with axillary metastasis
Male breast cancer

**Endocrine**

Thyroid nodule(s)
Hypothyroidism (postoperative)
Papillary carcinoma of thyroid
Follicular carcinoma of thyroid
Hypercalcemia
Hypocalcemia
Primary hyperparathyroidism
Addisonian crisis
Hyperthyroidism

**Skin and Soft Tissue**

Nevi
Melanoma
Squamous cell carcinoma
Basal cell carcinoma
Evaluation of soft tissue masses
Epidermal cyst
Tumors of dermal adenexae [Apocrine tumor]
Tumors of dermal adnexae [Eccrine tumor]
Tumors of dermal adnexae [Sebaceous tumor]
Tumors of dermal adnexae [Merkel cell tumor]
Dermatofibrosarcoma
Skin and soft tissue infections [Hidradenitis]
Skin and soft tissue infections [Cellulitis]
Skin and soft tissue infections [Necrotizing fasciitis]
Hand infections [Paronychia]
Hand infections [Felon]
Wound infections
Pilonidal cyst and sinus

**Surgical Critical Care**

Shock [Hypovolemic]
Shock [Septic]
Shock [Cardiogenic]
Shock [Neurogenic]
Systems dysfunction and failure [Respiratory]
Systems dysfunction and failure [Cardiac]
Systems dysfunction and failure [Gastrointestinal]
Systems dysfunction and failure [Hepatic]
Systems dysfunction and failure [Renal]
Systems dysfunction and failure [Coagulopathy]
Systems dysfunction and failure [Neurologic]
Derangements of electrolytes and acid-base
Anaphylaxis
Pneumonia - hospital acquired

**Trauma**

Blunt trauma
Penetrating trauma
Neck injuries [Vascular]
Neck injuries [Trachea/Larynx]
Neck injuries [Pharynx/esophagus]
Neck injuries [Nerve]
Chest injuries [Rib fractures]
Chest injuries [Sternal fractures]
Chest injuries [Flail chest]
Chest injuries [Pneumothorax]
Chest injuries [Hemothorax]
Chest injuries [Pulmonary contusion]
Chest injuries [Pulmonary laceration]
Chest injuries [Myocardial contusion]
Chest injuries [Cardiac tamponade]
Chest injuries [Esophageal injury]
Abdominal injuries [Diaphragm]
Abdominal injuries [Spleen]
Abdominal injuries [Liver]
Abdominal injuries [Stomach]
Abdominal injuries [Duodenum]
Abdominal injuries [Pancreas]
Abdominal injuries [Small intestine]
Abdominal injuries [Colon and rectum]
Retroperitoneal injuries [Retroperitoneal hematoma]
Retroperitoneal injuries [Pelvic fractures]
Retroperitoneal injuries [Renal injuries]
Retroperitoneal injuries [Bladder injuries]
Retroperitoneal injuries [Ureteral injuries]
Vascular injuries [Head/neck]
Vascular injuries [Thorax]
Vascular injuries [Abdomen]
Vascular injuries [Extremity]
Pediatric trauma
Geriatric trauma
Trauma in pregnancy

**Vascular - Arterial Disease**

Acute limb ischemia
Thromboembolic disease [Peripheral arterial emboli]
Thromboembolic disease [Acute arterial thrombosis]
Compartment syndromes
Diabetic foot infections

**Vascular - Venous**
Venous thrombosis/embolism
Thrombophlebitis, including suppurative
Venous stasis and chronic venous insufficiency
Varicose veins

**Vascular - Access**
Vascular access for dialysis

**Thoracic Surgery**
Pneumothorax
Hemothorax
Pleural effusion/empyema
Cardiac tamponade

**Pediatric Surgery**
Umbilical hernia
Inguinal hernia
Malrotation
Hypertrophic pyloric stenosis
Intussusception
Meckel's diverticulum

**Gynecology**
Ectopic pregnancy
Pelvic inflammatory disease
Incidental ovarian mass/cyst

**Head and Neck**
Cervical lymphadenopathy
Upper airway obstruction

**Nervous System**
Management of acute pain

**FOCUSED**

**Abdomen - General**
Chronic abdominal pain
Peritoneal neoplasms [Carcinomatosis]
Peritoneal neoplasms [Pseudomyxoma peritonei]
Spontaneous bacterial peritonitis
Desmoid tumors
Chylous ascites
Retroperitoneal fibrosis

**Abdomen - Biliary**
Gallbladder cancer
Cancer of the bile ducts
Choledochal cyst
Sclerosing cholangitis
Ampullary stenosis/spincter of Oddi dysfunction

**Abdomen - Liver**
Benign neoplasms [Hepatic adenoma]
Benign neoplasms [Focal nodular hyperplasia]
Benign neoplasms [Hemangioma]
Benign neoplasms [Miscellaneous]
Malignant neoplasms [Hepatocellular carcinoma]
Malignant neoplasms [Cholangiocarcinoma]
Malignant neoplasms [Malignant melanoma]
Malignant neoplasms [Miscellaneous]
Cirrhosis and portal hypertension [Ascites]
Cirrhosis and portal hypertension [Bleeding esophageal varices]
Cirrhosis and portal hypertension [Hepatic failure and encephalopathy]
Cirrhosis and portal hypertension [Hepatorenal syndrome]
Viral hepatitis (occupational risk)

**Abdomen - Pancreas**
Autoimmune pancreatitis
Chronic pancreatitis, including hereditary pancreatitis
Pancreatic insufficiency
Exocrine neoplasms [Ductal adenocarcinoma]
Exocrine neoplasms [Acinar cell carcinoma]
Exocrine neoplasms [Cystic neoplasms]
Exocrine neoplasms [Intraductal papillary mucinous neoplasms]
Other periampullary neoplasms
Endocrine neoplasms [Gastrinoma and Z-E syndrome]
Endocrine neoplasms [Insulinoma]
Endocrine neoplasms [VIPoma]
Endocrine neoplasms [Glucagonoma]
Endocrine neoplasms [Somatostatinoma]
Endocrine neoplasms [Nonfunctional tumors]
Lymphoma of pancreas

**Abdomen - Spleen**
Hemolytic anemias
Idiopathic thrombocytopenic purpura
Secondary hypersplenism and splenomegaly
Neoplasms of spleen
Splenic cysts

**Alimentary Tract - Esophagus**
Achalasia
Diverticula [Zenker's]
Diverticula [Epiphrenic]
Foreign bodies
Schatzki's ring
Chemical burns (ingestion)
Benign neoplasms
Malignant neoplasms [Adenocarcinoma]
Malignant neoplasms [Squamous cell carcinoma]
Other motility disorders [Diffuse esophageal spasm]
Other motility disorders [Nutcracker esophagus]
Other motility disorders [Presbyesophagus]
Other motility disorders [Scleroderma connective tissue disorders]

**Alimentary Tract - Stomach**
Morbid obesity
Bezoars and foreign bodies
Gastroparesis
Postgastrectomy syndromes

**Alimentary Tract - Small Intestine**
Short bowel syndrome
Enteric infections and blind loop syndrome

**Alimentary Tract - Large Intestine**
Endometriosis
Irritable bowel syndrome
Functional constipation
Infectious colitis

**Alimentary Tract - Anorectal**
Pelvic floor dysfunction
Incontinence
Anal dysplasia/sexually-transmitted disease
Rectal prolapse

**Endocrine**
Thyroiditis
Uncommon thyroid cancers [Medullary]
Uncommon thyroid cancers [Hurthle cell]
Uncommon thyroid cancers [Anaplastic]
Hyperparathyroidism [Secondary]
Hyperparathyroidism [Tertiary]
Recurrent or persistent hyperparathyroidism
Parathyroid carcinoma
Multiple endocrine neoplasias [MENI]
Multiple endocrine neoplasias [MENIIA]
Multiple endocrine neoplasias
Incidental adrenal mass
Pheochromocytoma
Primary hyperaldosteronism
Hypercortisolism [Cushing's syndrome]
Hypercortisolism [Cushing’s disease]
Adrenocortical carcinoma

**Skin and Soft Tissue**
Decubitus ulcer
Soft tissue sarcomas [Extremity]
Soft tissue sarcomas [Retroperitoneal]
Lymphedema

**Trauma**
Head injury [Closed]
Head injury [Penetrating]
Tracheobronchial injuries
Aortic Injuries
Urethral injuries
Orthopedic and spinal injuries [Spine fracture]
Orthopedic and spinal injuries [Pelvic fracture]
Orthopedic and spinal injuries [Extremity fractures]
Orthopedic and spinal injuries [Dislocations]
Orthopedic and spinal injuries [Sprains and strains]
Orthopedic and spinal injuries [Mangled and traumatic amputation]
Envenomation [Snakes and lizards]
Envenomation [Spiders]
Envenomation [Hymenoptera]
Envenomation [Scorpions]
Animal and human bites
Environmental injuries [Hypothermia]
Environmental injuries [Frostbite]
Burns [Flame burns]
Burns [Scald burns]
Burns [Electrical burns]
Burns [Chemical burns]
Burns [Inhalation injury]
Burns [Carbon monoxide poisoning]

**Vascular - Arterial Disease**
Arterial occlusive disease [Cerebrovascular occlusive disease]
Arterial occlusive disease [Aortoiliac disease]
Arterial occlusive disease [Chronic visceral occlusive disease]
Arterial occlusive disease [Renal artery occlusive disease]
Arterial occlusive disease [Femoropopliteal occlusive disease]
Arterial occlusive disease [Infrapopliteal occlusive disease]
Arterial occlusive disease [Upper extremity occlusive disease]
Arterial occlusive disease [Buerger disease]
Arterial occlusive disease [Fibromuscular dysplasia]
Arterial occlusive disease [Cystic medial necrosis]
Arterial occlusive disease [Behcet disease]
Arterial aneurysms [Aortic]
Arterial aneurysms [Visceral]
Arterial aneurysms [Peripheral arterial]
Aortic dissection
Claudication
Hypercoagulable syndromes
Carotid body tumors
Vascular graft infections
Aortic thrombosis
Thoracic outlet syndrome

**Transplantation**
Immunosuppression

**Thoracic Surgery**
Mediastinitis
Chylothorax
Lung cancer [Adenocarcinoma]
Lung cancer [Undifferentiated carcinoma]
Lung cancer [Small cell]
Lung cancer [Large cell]
Soft tissue sarcomas of chest wall
Mediastinal tumors and cysts [Thymoma]
Mediastinal tumors and cysts [Teratoma]
Mediastinal tumors and cysts [Neurogenic tumor]
Mediastinal tumors and cysts [Enteric cyst]
Mediastinal tumors and cysts [Pericardial cyst]
Mediastinal tumors and cysts [Bronchogenic cyst]
Superior vena cava syndrome
Tracheoinnominate fistula
Tracheoesophageal fistula
Valvular heart disease
Congestive heart failure
Endocarditis
Coronary artery disease
Ventricular aneurysms
Cardiomyopathy
Pericarditis

**Pediatric Surgery**
Gastrochisis
Omphalocele
Esophageal atresia
Tracheoesophageal fistula
Foreign bodies of the trachea/esophagus
Congenital diaphragmatic hernia
Duodenal atresia/stenosis
Pancreas divisum
Intestinal atresia and meconium ileus
Imperforate anus
Necrotizing enterocolitis
Congenital aganglosis (Hirschsprung's disease)
Biliary atresia
Choledochal cysts
Cryptorchidism
Wilms tumor
Neuroblastoma

**Plastic Surgery**
Aesthetic surgery [Abdomen]
Aesthetic surgery [Breast]
Postmastectomy reconstruction
Abdominal wall reconstruction

**Genitourinary**
Ureteral injury (iatrogenic)
Bladder dysfunction [Neurogenic]
Bladder dysfunction [Urinary incontinence]
Obstructive uropathy
Impotence
Neoplasms [Bladder]
Neoplasms [Ureter]
Neoplasms [Renal cell carcinoma]
Neoplasms [Prostate]
Neoplasms [Testicle]
Stone disease

**Gynecology**
Endometriosis
Ovarian neoplasms [Benign]
Ovarian neoplasms [Malignant]
Uterine neoplasms [Benign]
Uterine neoplasms [Malignant]
Cystocele
Rectocele

**Head and Neck**
Epistaxis
Mucosal cancers of the oral cavity
Mucosal cancers of the pharynx
Mucosal cancers of the larynx
Salivary gland tumors [Parotid gland]
Salivary gland tumors [Submandibular gland]

**Nervous System**
Management of chronic pain
## OPERATIONS/PROcedures By Level

### Essential — Common

**Abdomen - General**
- Exploratory laparotomy - open
- Exploratory laparotomy - laparoscopic

**Abdomen - Hernia**
- Repair inguinal/femoral hernia - open
- Repair inguinal/femoral hernia - laparoscopic
- Repair ventral hernia - open
- Repair ventral hernias - laparoscopic

**Abdomen - Biliary**
- Cholecystectomy with/without cholangiogram - open
- Cholecystectomy with/without cholangiogram - laparoscopic

**Abdomen - Liver**
- Needle/wedge biopsy - open
- Needle/wedge biopsy - laparoscopic

**Abdomen - Spleen**
- Splenectomy for disease - open
- Splenectomy for disease - laparoscopic

**Alimentary Tract - Esophagus**
- Laparoscopic antireflux procedure

**Alimentary Tract - Stomach**
- Percutaneous endoscopic gastrostomy
- Open gastrostomy

**Alimentary Tract - Small Intestine**
- Small bowel resection - open
- Adhesiolysis - open
- Adhesiolysis - laparoscopic
- Ileostomy
- Ileostomy closure
- Feeding jejunostomy - open
- Feeding jejunostomy - laparoscopic

**Alimentary Tract - Large Intestine**
- Appendectomy - open
- Appendectomy - laparoscopic
- Partial colectomy - open
- Partial colectomy - laparoscopic
- Colostomy
- Colostomy closure

**Alimentary Tract - Anorectal**
- Banding for internal hemorrhoids
- Hemorrhoidectomy
- Subcutaneous lateral internal sphincterotomy
- Drainage anorectal abscess
- Anal fistulotomy/seton placement

**Endoscopy**
- Esophagogastroduodenoscopy
- Proctoscopy
- Colonoscopy with or without biopsy/polypectomy
- Bronchoscopy
- Laryngoscopy

**Breast**
- Aspiration of breast cyst
- Duct excision
- Breast biopsy with or without needle localization
- Lumpectomy/quadrantectomy
- Simple mastectomy
- Skin-sparing mastectomy
- Axillary dissection
- Sentinel lymph node biopsy
- Modified radical mastectomy

**Endocrine**
- Partial or total thyroidectomy
- Parathyroidectomy

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<td>Tracheostomy</td>
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**ESSENTIAL — UNCOMMON**

| Abdomen - General                 | Open drainage abdominal abscess                                                                                              |
| Abdomen - Hernia                  | Repair miscellaneous hernias                                                                                               |
| Abdomen - Biliary                 | Cholecystostomy                                                                                                              |
|                                   | Common bile duct exploration - open                                                                                           |
|                                   | Choledochoscopy                                                                                                              |
|                                   | Choledochoenteric anastomosis                                                                                                 |
|                                   | Operation for gallbladder cancer (when found incidentally)                                                                    |
|                                   | Repair acute common bile duct injury                                                                                          |
| Abdomen - Liver                   | Drainage liver abscess                                                                                                        |
| Abdomen - Spleen                  | Partial splenectomy/splenorrhaphy                                                                                             |
| Alimentary Tract - Esophagus      | Open antireflux procedure                                                                                                     |
|                                   | Open repair of paraesophageal hernia                                                                                           |
|                                   | Laparoscopic repair of paraesophageal hernia                                                                                 |
|                                   | Repair/resection of perforated esophagus                                                                                       |
| Alimentary Tract - Stomach        | Partial/total gastrectomy                                                                                                     |
|                                   | Repair duodenal perforation                                                                                                   |
|                                   | Truncal vagotomy and drainage                                                                                                 |
| Alimentary Tract - Small Intestine | Superior mesenteric artery embolectomy/thrombectomy                                                                          |
| Alimentary Tract - Large Intestine | Subtotal colectomy with ileorectal anastomosis/ileostomy                                                                      |
| Alimentary Tract - Anorectal      | Excision of anal cancer                                                                                                       |
| Breast                            | Radical mastectomy                                                                                                            |
| Skin and Soft Tissue              | Wide local excision melanoma                                                                                                  |
|                                   | Sentinel lymph node biopsy for melanoma                                                                                         |
Trauma
Management of esophageal trauma
Management of gastric trauma
Management of duodenal trauma
Management of small bowel trauma
Management of colon trauma
Neck exploration for trauma
Exploratory thoracotomy - open
Exploratory laparotomy - open
Exploratory laparotomy - laparoscopic
Splenectomy/splenorrhaphy
Repair hepatic lacerations
Drainage pancreatic injury
Debride/suture major wounds
Repair/resection for kidney trauma
Repair ureteral injury
Repair bladder injury
Repair of carotid artery injury
Repair of abdominal aorta or vena cava injury
Repair peripheral vessels
Fasciotomy for injury
Repair cardiac injury
Vascular - Arterial Disease
Embolectomy/thrombectomy artery
Amputations [Above knee]
Amputations [Below knee]
Amputations [Toe]
Thoracic Surgery
Exploratory thoracotomy
Pericardial window for drainage
Pediatric Surgery
Pyloromyotomy
Emergency operation for malrotation
Emergency operation for intussusception
Genitourinary
Hydrocelectomy
Nephrectomy
Orchiectomy
Cystostomy
Repair iatrogenic ureteral injury
Gynecology
Hysterectomy
Salpingo-oophorectomy
Head and Neck
Cricothyroidotomy
Nervous System
Digital nerve block

COMPLEX
Abdomen - General
Retroperitoneal lymph node dissection - open
Retroperitoneal lymph node dissection - laparoscopic
Operation for pseudomyxoma
Abdomen - Hernia
Component separation abdominal wall reconstruction
Abdomen - Biliary
Laparoscopic common bile duct exploration
Operation for gallbladder cancer (planned)
Operation for bile duct cancer
Excision choledochal cyst
Transduodenal sphincteroplasty
Abdomen - Liver
Segmentectomy/lobectomy - open
Segmentectomy/lobectomy - laparoscopic
Intraoperative ultrasound of liver
Portal-systemic shunt
Abdomen - Pancreas
Pancreaticoduodenectomy
Total pancreatectomy
Ampullary resection for tumor
Distal pancreatectomy
Longitudinal pancreaticojejunostomy
Frey procedure
Beger procedure
Intraoperative pancreatic ultrasound
Pancreatic debridement for necrosis - open
Pancreatic debridement for necrosis - laparoscopic/endoscopic
Drainage pancreatic pseudocyst

Alimentary Tract - Esophagus
Esophagectomy, total
Esophagogastrectomy
Cricopharyngeal myotomy with excision Zenker’s diverticulum
Heller myotomy - open
Heller myotomy - laparoscopic
Collis gastroplasty

Alimentary Tract - Stomach
Operation for morbid obesity - open
Operation for morbid obesity - laparoscopic
Laparoscopic gastric resection
Proximal gastric vagotomy
Revisional procedures for postgastrectomy syndromes

Alimentary Tract - Small Intestine
Stricturoplasty for Crohn’s disease

Alimentary Tract - Large Intestine
Total proctocolectomy and ileoanal pull-through

Alimentary Tract - Anorectal
Stapled hemorhoidectomy
Repair complex anorectal fistulae
Operation for incontinence/constipation
Transabdominal operation for rectal prolapse - open
Transabdominal operation for rectal prolapse - laparoscopic
Perineal operation for rectal prolapse
Operations for rectal cancer [Transanal resection]
Operations for rectal cancer [Abdominoperineal resection]
Operations for rectal cancer [Pelvic exenteration]

Endoscopy
Mediastinoscopy
Cystoscopy
ERCP

Breast
Stereotactic breast biopsy

Endocrine
Adrenalectomy - open
Adrenalectomy - laparoscopic

Skin and Soft Tissue
Ilioinguinal - femoral lymphadenectomy
Major resection for soft tissue sarcoma

Trauma
Burn debridement or grafting
Placement of intracranial pressure monitor
Reduction and stabilization of maxillofacial fracture
Repair of tendon or nerve
Hepatic resection for injury
Resection for pancreatic injury
Closed reduction of fracture
Open reduction of open/closed fracture
Debridement and reduction of open fracture
Repair of thoracic aorta, innominate, subclavian injury

Vascular - Arterial Disease
Arterial occlusive disease [Aorto-iliac/femoral bypass]
Arterial occlusive disease [Ilio-iliac/femoral bypass]
Arterial occlusive disease [Femoral-popliteal bypass]

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Arterial occlusive disease [Profunda endarterectomy]
Arterial occlusive disease [Infrapopliteal bypass]
Arterial occlusive disease [Other endarterectomy]
Arterial occlusive disease [Composite leg bypass graft]
Arterial occlusive disease [Revise/re-do lower extremity bypass]
Arterial occlusive disease [Arm bypass, endarterectomy, repair]
Arterial occlusive disease [Celiac/SMA endarterectomy/bypass]
Arterial occlusive disease [Renal endarterectomy/bypass]
Arterial occlusive disease [Femoral-femoral bypass]
Arterial occlusive disease [Axillo-femoral bypass]
Arterial occlusive disease [Axillo-popliteal-tibial bypass]
Amputation [Transmetatarsal]
Amputation [Upper extremity]
Amputation [Disarticulation]
Arterial aneurysm [Infrarenal aortoiliac]
Arterial aneurysm [Femoral aneurysm]
Arterial aneurysm [Popliteal aneurysm]
Arterial aneurysm [Suprarenal abdominal aortic]
Arterial aneurysm [Thoracoabdominal]
Arterial aneurysm [Thoracic aortic]
Cerebrovascular disease [Carotid endarterectomy]
Cerebrovascular disease [Reoperative carotid surgery]
Cerebrovascular disease [Excise carotid body tumor]
Cerebrovascular disease [Direct repair aortic arch branches]
Cerebrovascular disease [Vertebral artery operation]
Endovascular [Vascular ultrasound]
Endovascular [Angioscopy]
Endovascular [Balloon angioplasty]
Endovascular [Transcatheter stent]
Endovascular [Other endovascular graft]
Endovascular [Endovascular repair aortic aneurysm]
Endovascular [Endovascular repair other aneurysm]
Endovascular [Thrombolysis]
Miscellaneous [Pseudoaneurysm repair/injection]
Miscellaneous [Explore post-op bleed, thrombosis, infection]
Miscellaneous [Graft thrombectomy/revision]
Miscellaneous [Excise infected vascular graft]
Miscellaneous [Repair graft-enteric fistula]
Miscellaneous [Sympathectomy]
Miscellaneous [Harvest arm vein]
Miscellaneous [Thoracic outlet decompression]

**Vascular - Venous**
Venous embolectomy/thrombectomy
Venous reconstruction
Non-reconstructive venous ulcer operation
Repair A-V malformation

**Transplantation**
Donor nephrectomy
Donor hepatectomy
Renal transplant
Renal-pancreas transplant
En bloc abdominal organ retrieval
Liver transplant
Pancreas transplant

**Thoracic Surgery**
Thoracoscopy with or without biopsy
Thoracoscopic pleurodesis
Thoracoscopic esophagomyotomy (Heller)
Excision mediastinal tumor
Transsthoracic repair diaphragmatic hernia
Open drainage of empyema
Pneumonectomy
Cardiac procedures
Pericardiectomy
Pacemaker insertion

**Pediatric Surgery**
Excise branchial cleft anomaly
Excise thyroglossal duct cyst
Orchiopexy
Antireflux procedure - open
Antireflux procedure - laparoscopic
Repair intestinal atresia/stenosis
Repair diaphragmatic hernia
Repair omphalocoele/gastrochisis
Procedure for meconium ileus/necrotizing enterocolitis
Excision Wilms tumor/neuroblastoma
Operation for Hirschsprung's/imperforate anus
Repair esophageal atresia/tracheoesophageal fistula
Repair deformity chest wall

**Plastic Surgery**
Revision of scars/and resultant deformities
Composite tissue transfer
Major reconstructive procedures

**Genitourinary**
Prostatectomy
Ileal urinary conduit
Cystectomy

**Gynecology**
Caesarian section
Repair cystocele
Repair rectocele

**Head and Neck**
Resection of lip/tongue lesions
Parotidectomy
Modified radical neck dissection

**Nervous System**
Placement of indwelling epidural catheter
Placement of nerve stimulator for chronic pain
Celiac plexus blockade – percutaneous or endoscopic
Thoracic splanchnicectomy
Peripheral nerve block(s) other than digital
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