Critical Care Medicine
Certification Examination Blueprint

Purpose of the exam

The exam is designed to evaluate the knowledge, diagnostic reasoning, and clinical judgment skills expected of the certified critical care medicine specialist in the broad domain of the discipline. The ability to make appropriate diagnostic and management decisions that have important consequences for patients will be assessed. The exam may require recognition of common as well as rare clinical problems for which patients may consult a certified critical care medicine specialist.

Exam content

Exam content is determined by a pre-established blueprint, or table of specifications. The blueprint is developed by the ABIM and is reviewed annually and updated as needed for currency. Trainees, training program directors, and certified practitioners in the discipline are surveyed periodically to provide feedback and inform the blueprinting process.

The primary medical content categories of the blueprint are shown below, with the percentage assigned to each for a typical exam:

<table>
<thead>
<tr>
<th>Medical Content Category</th>
<th>% of Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renal, Endocrine, and Metabolic Disorders</td>
<td>15.0%</td>
</tr>
<tr>
<td>Cardiovascular Disorders</td>
<td>17.5%</td>
</tr>
<tr>
<td>Pulmonary Disease</td>
<td>20.0%</td>
</tr>
<tr>
<td>Infectious Disease</td>
<td>12.0%</td>
</tr>
<tr>
<td>Gastrointestinal Disorders</td>
<td>5.0%</td>
</tr>
<tr>
<td>Neurologic Disorders</td>
<td>9.5%</td>
</tr>
<tr>
<td>Hematologic and Oncologic Disorders</td>
<td>5.5%</td>
</tr>
<tr>
<td>Surgery, Trauma, and Transplantation</td>
<td>7.0%</td>
</tr>
<tr>
<td>Pharmacology and Toxicology</td>
<td>4.5%</td>
</tr>
<tr>
<td>Research, Administration, and Ethics</td>
<td>2.0%</td>
</tr>
<tr>
<td>Critical Care Ultrasound Scanning</td>
<td>2.0%</td>
</tr>
<tr>
<td></td>
<td>100%</td>
</tr>
</tbody>
</table>
Exam questions in the content areas above may also address clinical topics in general internal medicine that are relevant to the practice of critical care medicine (including some general pediatrics with an emphasis on adolescent medicine).

**Exam format**

The exam is composed of multiple-choice questions with a single best answer, predominantly describing patient scenarios. Questions ask about the work done (that is, tasks performed) by physicians in the course of practice:

- Making a diagnosis
- Ordering and interpreting results of tests
- Recommending treatment or other patient care
- Assessing risk, determining prognosis, and applying principles from epidemiologic studies
- Understanding the underlying pathophysiology of disease and basic science knowledge applicable to patient care

Clinical information presented may include various media illustrating relevant findings, such as diagnostic imaging studies. Some questions require interpretation of pictorial material, such as pressure tracings, ultrasound scans, magnetic resonance imaging scans, electrocardiograms, radiographs, computed tomograms, radionuclide scans, and photomicrographs.


The blueprint can be expanded for additional detail as shown below. Each of the medical content categories is listed there, and below each major category are the content subsections and specific topics that may appear in the exam. Please note: actual exam content may vary.

<table>
<thead>
<tr>
<th>Renal, Endocrine, and Metabolic Disorders</th>
<th>15% of Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium-water balance</td>
<td>2%</td>
</tr>
<tr>
<td>Hyponatremia</td>
<td></td>
</tr>
<tr>
<td>Syndrome of inappropriate antidiuretic hormone secretion</td>
<td></td>
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<tr>
<td>Cerebral salt wasting</td>
<td></td>
</tr>
<tr>
<td>Psychogenic polydipsia</td>
<td></td>
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<tr>
<td>Hypothyroidism</td>
<td></td>
</tr>
<tr>
<td>Iatrogenic</td>
<td></td>
</tr>
<tr>
<td>Exercise-induced</td>
<td></td>
</tr>
</tbody>
</table>
Hypernatremia
  Central diabetes insipidus
  Nephrogenic diabetes insipidus
  Osmotic diuresis
  Primary hypodipsia
  Dehydration
  Gastrointestinal fluid losses

Hypervolemia
Hypovolemia

**Potassium disorders**

Hyperkalemia
  Pseudohyperkalemia
  Drug-induced
  Adrenal insufficiency
  Renal tubular acidosis

Hypokalemia
  Vomiting
  Diarrhea
  Renal losses
    Drug-induced
    Renal tubular acidosis

**Acid-base disorders**

Metabolic acidosis
  Increased anion gap
    Lactic acidosis
    Ketoacidosis
    Hypoalbuminemia
  Normal anion gap
    Diarrhea
    Saline resuscitation-associated
    Drug-induced
    Renal tubular acidosis
  Decreased anion gap in multiple myeloma

Metabolic alkalosis
  Diuretic-induced (contraction alkalosis)
  Other metabolic alkalosis topics (parenteral nutrition–induced, complications of citrate anticoagulation)

Mixed acid-base disorders
Respiratory acidosis
Respiratory alkalosis
Toxic ingestions

- High osmolar gap
  - Ethanol
  - Methanol
  - Isopropyl alcohol
  - Ethylene glycol
  - Propylene glycol
- Normal osmolar gap
  - Salicylates

Calcium, phosphate, and magnesium disorders

- Hyperphosphatemia
- Hypophosphatemia
- Hypercalcemia
- Hypocalcemia
- Hypermagnesemia
- Hypomagnesemia

Hyperammonemia

Diabetes mellitus (excluding diabetic ketoacidosis) and energy metabolism

- Hyperglycemic hyperosmolar state
- Hyperglycemia
- Hypoglycemia

Thyroid disorders

- Hypothyroidism
- Hyperthyroidism
- Euthyroid sick syndrome

Parathyroid disorders

Adrenal disorders

- Adrenal insufficiency
  - Relative adrenal insufficiency in critical illness
- Adrenal excess
- Addison’s Disease

Pituitary disorders

Tumor-related syndromes

Acute renal failure

- Contrast-induced
- Pigment-induced
- Oncology-related
- Pre-renal disease
- Intrinsic disease
  - Glomerulonephritis
Interstitial nephritis
Rhabdomyolysis
Acute tubular necrosis
Renal replacement therapy

<table>
<thead>
<tr>
<th>Cardiovascular Disorders</th>
<th>17.5% of Exam</th>
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</thead>
<tbody>
<tr>
<td><strong>Acute coronary syndromes</strong></td>
<td>&lt;2%</td>
</tr>
<tr>
<td>Unstable angina pectoris and non-ST-segment elevation myocardial infarction (NSTEMI)</td>
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<tr>
<td>Unstable angina pectoris</td>
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<tr>
<td>NSTEMI</td>
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<tr>
<td>ST-segment elevation myocardial infarction (STEMI)</td>
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</tr>
<tr>
<td><strong>Diagnosis</strong></td>
<td></td>
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<tr>
<td><strong>Complications</strong></td>
<td></td>
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<tr>
<td>Heart failure, cardiogenic shock</td>
<td></td>
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<tr>
<td>Ventricular septal defect</td>
<td></td>
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<tr>
<td>Acute mitral regurgitation</td>
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<tr>
<td>Ventricular wall rupture</td>
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<tr>
<td>Electrical conduction abnormalities</td>
<td></td>
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<tr>
<td>Right ventricular failure</td>
<td></td>
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<tr>
<td><strong>Arrhythmias</strong></td>
<td></td>
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<tr>
<td>Management of STEMI</td>
<td></td>
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<tr>
<td>Cocaine-related ischemia</td>
<td></td>
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<tr>
<td><strong>Arrhythmias</strong></td>
<td>&lt;2%</td>
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<tr>
<td>Supraventricular tachycardia</td>
<td></td>
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<tr>
<td>Atrial fibrillation</td>
<td></td>
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<tr>
<td>Atrial flutter</td>
<td></td>
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<tr>
<td>Multifocal atrial tachycardia</td>
<td></td>
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<tr>
<td>Pre-excitation syndromes</td>
<td></td>
</tr>
<tr>
<td>Paroxysmal supraventricular tachycardia</td>
<td></td>
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<tr>
<td>(atrioventricular [AV] nodal reentrant tachycardia)</td>
<td></td>
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<tr>
<td>Ventricular arrhythmias</td>
<td></td>
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<tr>
<td>Nonsustained ventricular tachycardia</td>
<td></td>
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<tr>
<td>Monomorphic ventricular tachycardia</td>
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<tr>
<td>Polymorphic ventricular tachycardia</td>
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<tr>
<td>Ventricular fibrillation</td>
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<tr>
<td>Accelerated idioventricular rhythm</td>
<td></td>
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<tr>
<td>Long QT syndrome</td>
<td></td>
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<tr>
<td>Brugada syndrome</td>
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</tbody>
</table>
Bradyarrhythmias
  Sinus bradycardia
  Sinoatrial exit block
  Atrioventricular block
Pacemakers and defibrillators

**Heart failure** 3.5%
  Heart failure with reduced ejection fraction (HFrEF)
  Heart failure with preserved ejection fraction (HFpEF)

**Hemodynamic monitoring** 5.5%
  Interpretation of arterial catheterization
  Pulmonary arterial catheterization
  Central venous catheterization
  Non-invasive hemodynamic monitoring

**Vascular disorders** <2%
  Aortic dissection and aneurysm
    Aortic dissection
    Aortic aneurysm and transection
  Shock
  Hypertensive emergency and urgency

**Valvular heart disease** <2%
  Mitral stenosis
  Aortic stenosis
  Aortic regurgitation
  Mitral regurgitation
  Endocarditis
  Structural defects
    Atrial
    Ventricular

**Pericardial disease** <2%
  Pericarditis
  Cardiac tamponade

**Myocardial disease** <2%
  Myocarditis
  Hypertrophic cardiomyopathy
  Peripartum cardiomyopathy
  Stress cardiomyopathy

**Mechanical circulatory support** <2%
  Intraaortic balloon pump (IABP) counterpulsation
  Extracorporeal membrane oxygenation (ECMO)
  Ventricular assist devices (VADs)

**Transplanted heart** <2%
<table>
<thead>
<tr>
<th>Pulmonary Disease</th>
<th>20% of Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Respiratory failure</strong></td>
<td>2%</td>
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<tr>
<td>Hypoxemic</td>
<td></td>
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<tr>
<td>Hypercapnic</td>
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<tr>
<td><strong>Mechanical ventilation</strong></td>
<td>6%</td>
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<tr>
<td>Initiation and maintenance of mechanical ventilation</td>
<td></td>
</tr>
<tr>
<td>Endotracheal intubation and tracheostomy</td>
<td></td>
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<tr>
<td>Modes</td>
<td></td>
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<tr>
<td>Oxygenation</td>
<td></td>
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<tr>
<td>Ventilation (CO₂)</td>
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<tr>
<td>Waveforms</td>
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<tr>
<td>Respiratory system compliance (lung mechanics)</td>
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<tr>
<td>Complications of mechanical ventilation</td>
<td></td>
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<tr>
<td>Barotrauma</td>
<td></td>
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<tr>
<td>Bronchopleural fistula</td>
<td></td>
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<tr>
<td>Ventilator-induced lung injury</td>
<td></td>
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<tr>
<td>Dynamic hyperinflation (auto-PEEP)</td>
<td></td>
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<tr>
<td>Intracardiac shunt</td>
<td></td>
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<tr>
<td>Complications of endotracheal tubes and tracheostomy</td>
<td></td>
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<tr>
<td>Liberation from mechanical ventilation</td>
<td></td>
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<tr>
<td>Noninvasive ventilation</td>
<td></td>
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<tr>
<td><strong>Airway disease</strong></td>
<td>2%</td>
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<tr>
<td>Upper airway disease</td>
<td></td>
</tr>
<tr>
<td>Upper airway obstruction</td>
<td></td>
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<tr>
<td>Tracheoesophageal fistula</td>
<td></td>
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<tr>
<td>Intubation-related laryngeal edema</td>
<td></td>
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<tr>
<td>Anaphylactic airway edema and increased negative inspiratory pressure</td>
<td></td>
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<tr>
<td>Airway control</td>
<td></td>
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<tr>
<td>Asthma</td>
<td></td>
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<tr>
<td>Chronic obstructive pulmonary disease (COPD)</td>
<td></td>
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<tr>
<td><strong>Parenchymal lung disease</strong></td>
<td>5%</td>
</tr>
<tr>
<td>Acute respiratory distress syndrome (ARDS)</td>
<td></td>
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<tr>
<td>Pneumonia</td>
<td></td>
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<tr>
<td>Community-acquired pneumonia (CAP)</td>
<td></td>
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<tr>
<td>Typical bacterial</td>
<td></td>
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<tr>
<td>Atypical bacterial</td>
<td></td>
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<tr>
<td>Aspiration</td>
<td></td>
</tr>
</tbody>
</table>
Viral
Fungal
Hospital-acquired pneumonias and immunocompromised hosts
Ventilator-associated pneumonia (VAP)
Hematogenous pneumonia
Aspergillus pneumonia
Non-Aspergillus pneumonia
Pneumocystis jirovecii pneumonia
Viral pneumonia

Pulmonary edema
Neurogenic
Tocolytic
Negative-pressure
High-altitude
Hypersensitivity pneumonitis
Diffuse alveolar hemorrhage
Atelectasis

**Pulmonary vascular disorders** 2%
Pulmonary thromboembolism
Deep venous thrombosis (DVT)
Pulmonary embolism (PE)
Nonthrombotic embolism
Air
Tumor
Septic
Pulmonary hypertension
Acute chest syndrome in sickle cell disease
Pulmonary vasculitis
Hepatopulmonary syndrome

**Hemoptysis** <2%
Massive
Submassive

**Pleural disorders** 2%
Pleural effusion
Infectious (empyema)
Noninfectious
Pneumothorax
Hemothorax
<table>
<thead>
<tr>
<th>Infection Type</th>
<th>Example Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Systemic infections</strong></td>
<td>&lt;2%</td>
</tr>
<tr>
<td>Sepsis and septic shock</td>
<td></td>
</tr>
<tr>
<td>Bacterial infections (typical and atypical)</td>
<td>Tuberculosis, Atypical mycobacterial infections, Nocardiosis, Listeriosis, Brucellosis, Typhoid fever, Tularemia, Plague, Rocky Mountain spotted fever, Erlichiosis/Anaplasmosis, Lyme disease, Leptospirosis</td>
</tr>
<tr>
<td><strong>Fungal infections</strong></td>
<td></td>
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<tr>
<td><strong>Viral infections</strong></td>
<td></td>
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<tr>
<td><strong>Parasitic diseases</strong></td>
<td></td>
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<tr>
<td>Malaria</td>
<td></td>
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<tr>
<td>Babesiosis</td>
<td>Strongyloides hyperinfection syndrome, Giardiasis</td>
</tr>
<tr>
<td><strong>Central nervous system infections</strong></td>
<td>&lt;2%</td>
</tr>
<tr>
<td>Meningitis</td>
<td></td>
</tr>
<tr>
<td>Bacterial</td>
<td>Meningococcal, Pneumococcal, Syphilitic, Listerial</td>
</tr>
<tr>
<td>Fungal</td>
<td></td>
</tr>
<tr>
<td>Encephalitis</td>
<td>Viral</td>
</tr>
<tr>
<td>Herpes simplex virus</td>
<td>West Nile virus, Rabies</td>
</tr>
<tr>
<td>Parasitic</td>
<td></td>
</tr>
</tbody>
</table>
Brain abscess
Epidural abscess

**Head, neck, and upper airway infections**
- Eye and orbit
- Septic cavernous sinus thrombosis
- Soft tissue infections of the head and neck
- Sinusitis
- Epiglottitis

**Cardiovascular infections**
- Pericarditis
- Endocarditis
- Device-related infections
- Catheter-related infections (peripheral, central venous, arterial, pulmonary artery)

**Gastrointestinal and intra-abdominal infections**
- Esophageal
- Liver
- Gallbladder and biliary
- Pancreatitis
  - Necrotizing (infected)
  - Pancreatic abscess
- Gastroenteritis
  - Community-acquired bacterial
- Colitis and diverticulitis
  - *Clostridiodioides (Clostridium) difficile*-associated
- Parasitic
- Necrotizing enterocolitis (typhlitis)
- Cytomegalovirus colitis
- Peritonitis
- Small intestine and appendix

**Genitourinary tract infections**
- Cystitis, including catheter-related
- Pyelonephritis
- Perinephric abscess

**Soft tissue, bone, and joint infections**
- Bites
- Septic arthritis

**Infections associated with nonvascular transcutaneous catheters**
Antimicrobial therapy and resistance
- Nonallergic toxicity
- Allergic reactions
- Resistant organisms
  - Gram-positive organisms
  - Gram-negative organisms
  - Fungi and inherent susceptibility
    - patterns and resistance
Pharmacokinetics
Infections in immunocompromised hosts
- Opportunistic infections in human immunodeficiency
  virus (HIV) infection
- Neutropenia
- Transplantation
  - Solid organ
  - Hematopoietic cell
- Asplenia
- Corticosteroid immunosuppression
Virulence factors
- Toxic shock
Bioterrorism
Hospital infection control

Gastrointestinal Disorders 5.0% of Exam

Esophagus
- Corrosive injury
- Perforation and rupture
- Fistula
Stomach
- Peptic ulcer disease
- Non-peptic ulcer disease
- Perforation
- Mechanical disorders
Small intestine
- Perforation
- Hemorrhage
- Mechanical and motility disorders
- Inflammatory bowel diseases
Large intestine
- Perforation
- Hemorrhage
- Mechanical and motility disorders
- Colonic ischemia

Liver
- Hepatitis
  - Viral
  - Autoimmune
  - Alcohol- and drug-induced
  - Toxin and solvent exposure
  - Ischemic (shock liver)
  - Budd-Chiari syndrome
- Portal hypertension
  - Esophageal variceal hemorrhage
  - Gastric variceal hemorrhage
  - Spontaneous bacterial peritonitis
  - Hepatorenal syndrome
  - Hepatopulmonary syndrome
  - Portopulmonary hypertension
- Fulminant hepatic failure
  - Infection
  - Alcohol- and drug-induced
  - Tumor
  - Infiltrative diseases and nonalcoholic steatohepatitis (NASH)
  - Toxin exposure
  - Encephalopathy
  - Cerebral edema
  - Hypotension

Pancreas
- Pancreatitis
  - Infectious
  - Gallbladder disease
  - Tumor
  - Alcohol- and drug-induced
  - Toxin exposure
  - Hypertriglyceridemia-induced
  - Complications
Gallbladder and biliary tract  <2%
  Cholecystitis, calculous and acalculous
  Cholangitis

<table>
<thead>
<tr>
<th>Neurologic Disorders</th>
<th>9.5% of Exam</th>
</tr>
</thead>
</table>

Brain death  <2%
(also see entry in Research, Ethics, and Administration)

Cerebrovascular disease  2.5%
  Ischemic stroke
  Intracerebral hemorrhage
  Subarachnoid hemorrhage and aneurysm
    Complications
      Vasospasm
    Other subarachnoid hemorrhage and aneurysm
      topics (hydrocephalus)
  Cerebral vein and sinus thrombosis

Seizures and status epilepticus  <2%
  Seizures complicating critical illness
    Seizures caused by critical illness
    Pre-existing epilepsy in critically ill patients
  Status epilepticus
    Generalized convulsive status epilepticus
    Nonconvulsive status epilepticus
  Electroencephalogram (EEG) monitoring in the intensive care unit (ICU)
  Repetitive seizures

Neurogenic pulmonary edema  <2%

Neuromuscular respiratory failure  <2%
  Guillain-Barré syndrome
  Critical illness myopathy
  Critical illness polyneuropathy
  Tetanus
  Myasthenia gravis
  Botulism

Increased intracranial pressure  <2%

Head trauma  <2%
  Nonpenetrating head trauma
  Penetrating head trauma
Spinal cord injury <2%
  Cervical spine injury
  Thoracic spine injury
Coma, encephalopathy, and delirium <2%
  Anoxic brain injury
  Metabolic encephalopathy
  Drug-induced encephalopathy
  Drug and alcohol withdrawal
  ICU-related delirium
  Targeted temperature management
Analgesia, sedation, and neuromuscular junction blockade 2%
  Analgesia
  Sedation
  Neuromuscular junction blockade

### Hematologic and Oncologic Disorders 5.5% of Exam

**Red blood cell diseases** <2%
  Anemias
  Polycythemias
  Hemoglobinopathies

**White blood cell diseases** <2%
  Leukopenia (immune, drug-related)
  Leukemias
  Lymphoma
  Multiple myeloma

**Platelet disorders** <2%
  Thrombocytosis
  Thrombocytopenia
  Platelet dysfunction

**Coagulopathies** <2%
  Disseminated intravascular coagulation (DIC)
  Factor deficiencies
  Antithrombotic agents and reversal of coagulopathy
  Hypothermia
  Hemorrhagic shock

**Hypercoagulable states** <2%
  Proteins C and S, and antithrombin deficiency
  Factor V Leiden mutation
  Malignancy
  Hormone replacement therapy and oral contraceptives
Antiphospholipid antibody syndrome

**Transfusion medicine**  
<2%
- Blood products
- Apheresis
- Adverse effects
- Massive blood transfusion
- Transfusion refusal

**Solid tumors**  
<2%

**Oncologic syndromes**  
<2%
- Superior vena cava syndrome
- Tumor lysis syndrome
- Spinal cord compression
- Hyperviscosity syndrome
- Hypercalcemia

**Hematopoietic cell transplantation**  
<2%
- Graft-versus-host disease
- Hepatic sinusoidal obstruction syndrome  
  (veno-occlusive disease)
- Respiratory distress

**Complications of immunosuppressive drugs and chemotherapy**  
<2%
- Cyclosporine
- Corticosteroids
- Alkylating agents
- Methotrexate
- Sirolimus
- Tacrolimus
- Mycophenolate mofetil
- Azathioprine

<table>
<thead>
<tr>
<th>Surgery, Trauma, and Transplantation</th>
<th>7.0 % of Exam</th>
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</thead>
<tbody>
<tr>
<td><strong>Cardiovascular and vascular surgery</strong></td>
<td>&lt;2%</td>
</tr>
<tr>
<td>Cardiac</td>
<td></td>
</tr>
<tr>
<td>Mediastinal disease</td>
<td></td>
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<tr>
<td>Vascular, aortic and peripheral</td>
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<tr>
<td>Thoracic</td>
<td></td>
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<tr>
<td><strong>Abdominal and gastrointestinal</strong></td>
<td>&lt;2%</td>
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<tr>
<td>Acute abdomen</td>
<td></td>
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<tr>
<td>Postoperative complications</td>
<td></td>
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<tr>
<td>Mesenteric ischemia and ischemic colitis</td>
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</tbody>
</table>
Abdominal compartment syndrome

**Genitourinary and obstetric emergencies** <2%
- Urologic
- Obstetric

**Skin and soft tissues and extremities** <2%
- Soft tissue infections
- Crush injury, myonecrosis, and rhabdomyolysis
- Necrotizing fasciitis
- Acute compartment syndrome

**Environmental injury** 3.5%
- Inhalation injury
- Hypothermia
- Submersion injury, near-drowning, and diving trauma
- Altitude injury
- Electrical injury and lightning strike
- Radiation injury
- Bioterrorism, noninfectious
- Heatstroke
- Burn injury

**General postoperative management** <2%

**Trauma** <2%
- Flail chest
- Pulmonary contusion
- Hemothorax
- Great vessel injury
- Airway injury, tracheobronchial laceration and rupture
- Foreign body aspiration
- Blunt myocardial injury
- Fat embolism syndrome
- Intra-abdominal injury
- Massive bleeding
- Shock

**Transplantation** <2%
- Heart
- Lung
- Liver
- Kidney
- Pancreas and intestines
- Organ donation
<table>
<thead>
<tr>
<th><strong>Pharmacology and Toxicology</strong></th>
<th>4.5% of Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Basic pharmacologic principles</strong></td>
<td>&lt;2%</td>
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<tr>
<td>Pharmacokinetics</td>
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<tr>
<td>Dosing adjustments for disease states</td>
<td></td>
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<tr>
<td><strong>Drug-drug interactions</strong></td>
<td>&lt;2%</td>
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<tr>
<td><strong>Adverse effects of drugs</strong></td>
<td>&lt;2%</td>
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<tr>
<td>Immunologic allergic reactions</td>
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<tr>
<td>Anaphylaxis</td>
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<tr>
<td>Thrombotic thrombocytopenic purpura</td>
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<tr>
<td>Stevens-Johnson syndrome</td>
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<tr>
<td>Nonimmunologic adverse effects of drugs</td>
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<tr>
<td>Electrolyte and metabolic</td>
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<tr>
<td>Hyperthermia</td>
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<tr>
<td>Neurologic</td>
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<tr>
<td>Renal</td>
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<tr>
<td>Hematologic</td>
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<tr>
<td>Cardiac</td>
<td></td>
</tr>
<tr>
<td><strong>Toxicology, drug overdose, and poisoning</strong></td>
<td>&lt;2%</td>
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<tr>
<td>Acetaminophen</td>
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<tr>
<td>Beta-adrenergic blockers</td>
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<tr>
<td>Calcium channel blockers</td>
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<tr>
<td>Cyanide</td>
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<tr>
<td>Tricyclic antidepressants</td>
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<tr>
<td>Nitroprusside</td>
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<tr>
<td>Oral antihyperglycemic agents</td>
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<tr>
<td>Organophosphates</td>
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<tr>
<td>Salicylates</td>
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<tr>
<td>Sarin (nerve) gas</td>
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<tr>
<td>Selective serotonin reuptake inhibitors (SSRIs)</td>
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<tr>
<td>Additional psychotropic drugs</td>
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<tr>
<td>Scombroid food poisoning</td>
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<td>Muscle relaxants</td>
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<tr>
<td>Xanthines</td>
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<tr>
<td>Iron toxicity</td>
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<tr>
<td>Antibiotic toxicity</td>
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<tr>
<td>Carbon monoxide</td>
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<tr>
<td>Methemoglobinemia</td>
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</tbody>
</table>
**Research, Administration, and Ethics**  
2.0% of Exam

- **Intensive care unit (ICU) administration** <2%
  - Regulatory issues
  - Intensive care unit (ICU) physical design
  - Continuous quality improvement and patient safety
  - Isolation

- **Staffing issues** <2%
  - Physician extenders in the intensive care unit (ICU)
  - Interactions between hospitalists and intensivists

- **Medicolegal interactions** <2%
- **Ethical considerations** <2%
  - Patient autonomy
  - Legal surrogates
  - Informed consent for medical procedures

- **Brain death** (also see entry in Neurologic Disorders) <2%
- **Conflict of interest** <2%
- **Advance directives** <2%

- **Patient confidentiality and Health Insurance Portability and Accountability Act (HIPAA) regulations** <2%

- **End-of-life issues** <2%
- **Organ donation** <2%
- **Medical futility** <2%

- **Medical research** <2%
  - Clinical trial design
  - Statistical analysis
  - Institutional review boards

- **Teaching and education** <2%
  - Teaching formats

- **Psychosocial issues** <2%
  - Professionalism
  - Intensive care unit (ICU) burnout
  - Impaired health-care professional

**Critical Care Ultrasound Scanning**  
2.0% of Exam

- **Cardiac** <2%
- **Pulmonary** <2%
- **Abdominal** <2%
- **Neurologic** <2%
- **Vascular** <2%

January 2021