



<b>Pediatric Sonography (PS) Tasks 2014</b>	
<b>Anatomy and Physiology</b>	<b>30%</b>
<i>Normal anatomy</i>	
Evaluate anatomy of the brain and skull	
Evaluate anatomy of the spine	
Evaluate anatomy of the gastrointestinal system, e.g., liver, spleen, pancreas, bowel	
Evaluate anatomy of the neck	
Evaluate anatomy of superficial structures	
Evaluate anatomy of the chest, e.g., pleural space, lung, thymus	
Evaluate musculoskeletal anatomy, e.g., hips and joints	
Identify normal developmental changes	
Understand age-specific growth standards	
<i>Perfusion and function</i>	
Evaluate peripheral vascular anatomy	
Evaluate abdominal vascular anatomy	
Evaluate intracranial vascular anatomy	
Evaluate anatomy of the genitourinary system, e.g., scrotum, kidneys, adrenal gland, bladder, uterus, ovaries	
<b>Pathology</b>	<b>35%</b>
<i>Abnormal physiology and perfusion</i>	
Identify vascular malformations	
Identify congenital abnormalities, i.e., neurulation, neural plate closure, migration anomalies, hindbrain, cerebellar, callosal agenesis	
Identify neurocutaneous syndromes, i.e. tuberous sclerosis, Von Hippel-Lindau, Sturge-Weber	
Identify hydrocephalus/ventriculomegaly	
Identify spinal malformations	
Evaluate for splenic abnormalities, e.g., polysplenia	
Evaluate for pancreatic abnormalities, i.e., cystic fibrosis, pancreatitis, and lesions	
Evaluate for stomach, duodenum, and intestine abnormalities, i.e., duplication cysts, pyloric stenosis, necrotizing enterocolitis, intussusception, masses	
Evaluate for kidney abnormalities, i.e., horseshoe, duplication anomalies, cystic diseases	
Evaluate for ureter and bladder abnormalities, i.e., ureterocele, duplication, bladder extrophy, urachal anomalies, vesicoureteral reflux, obstructive process	
Evaluate male genital tract for abnormalities, e.g., hydroceles, cryptorchidism	
Evaluate female genital tract for abnormalities, e.g., hematometrocolpos	
Evaluate for neck abnormalities, e.g., vascular and nonvascular lesions	
Evaluate chest masses, e.g., sequestration vs. congenital pulmonary airway malformation	
Evaluate diaphragmatic paralysis (M-mode) and congenital hernia	
Evaluate the hip for developmental dysplasia	
Identify findings of hypoxic-ischemic insults in the preterm and term infants	
Evaluate intracranial hemorrhage, infection, and masses	
Identify hydrocephalus/ventriculomegaly	
Identify findings of sickle cell disease	
Evaluate for hepatobiliary disease, i.e., infection, obstruction, parenchymal liver disease, benign and malignant lesions, etc.	
Evaluate liver transplant	
Evaluate for splenic disease, i.e., infection, benign, malignant lesions, and congenital lesions	
Evaluate kidneys for abnormalities, i.e., stone disease, infection, masses, vascular disease	
Evaluate renal failure and transplants	
Evaluate ureter and bladder for abnormalities, i.e., infection, masses, vesicoureteral reflux	
Evaluate adrenal glands for masses and hemorrhage	
Evaluate male genital tract for abnormalities, i.e., torsion, infection, tumors	

Evaluate female genital tract for abnormalities, i.e., torsion, masses
Evaluate the glands and soft tissues for infection, inflammation, lymph nodes, and masses
Evaluate the pleural space and lungs for abnormalities, i.e., simple or complicated pleural effusion and consolidation
Evaluate joint effusion in hips or other joints
Evaluate tendons and synovium for tenosynovitis and synovial hypertrophy
Evaluate superficial structures for foreign bodies, infections, and masses
Evaluate intravenous lines and vessels for abnormalities, i.e., thrombosis, pseudoaneurysm, and narrowing
Evaluate hernias, i.e., inguinal hernias
Evaluate peritoneal cavity for the presence of fluid and abscess
Evaluate retroperitoneum for masses, i.e., lymphadenopathy
Evaluation following surgery and interventional procedure
<b>Integration of Data 9%</b>
<i>Incorporate outside data (Clinical assessment, history and physical [H&amp;P], lab values)</i>
Assess indications for examination requested
Assess relevant clinical laboratory values for examination being performed
Assess relevant patient signs and symptoms for examination being performed
Correlate ultrasound findings with other imaging modalities
<b>Protocols 10%</b>
<i>Clinical standards and guidelines</i>
Inform patient or referring practitioner of examination preparations (i.e., fasting for abdominal imaging)
Modify the examination based on clinical history or sonographic findings
Use multiple patient positions to evaluate anatomy
Utilize appropriate acoustic windows and scan planes
Modify imaging protocol in the premature or critically ill infant
Modify imaging protocol in the uncooperative infant/child
<i>Measurement techniques</i>
Obtain measurements of structures
Obtain Doppler velocities and measurements
<b>Physics and Instrumentation 11%</b>
<i>Artifacts</i>
Modify the examination due to gray-scale artifacts
Modify the examination due to color Doppler artifacts
Modify the examination due to spectral Doppler artifacts
<i>Imaging instruments</i>
Select proper examination technique, e.g., M-mode, B-mode, Doppler, harmonic imaging
Adjust console settings to achieve optimal imaging display
Select proper transducer
<b>Other 5%</b>
<i>Managing medical emergencies</i>
Recognize findings that require immediate attention
<i>Traumatic injury</i>
Identify abnormalities related to traumatic events
<i>Interventional procedures</i>
Maintain infection control
Use sterile technique when preparing for procedure
Provide ultrasound guidance during procedures