

Table 1 Delineation of EUS core and advanced skills. Core skills represent those EUS competencies integral to the practice of Emergency Medicine residency graduates.

Anatomical Content	Core Skills	Advanced Skills
Physics		
	Basic ultrasound physics	Advanced ultrasound physics
Trauma (FAST only)		
	Primary Survey	Secondary Survey
	Pericardial fluid	Soft tissue injury
	Peritoneal fluid	Bony injury
	Pleural fluid	Optic nerve sheath diameter
	Pneumothorax	Limited solid organ injury
Cardiac		
	Pericardial fluid	Chamber size evaluation and comparison
	Asystole	Regional wall motion
	Global left ventricular function	Aortic root assessment
	Global right ventricular size	Valvular assessment
	Tamponade physiology	Cardiac output estimation
Chest and Lung		
	Pneumothorax	Interstitial fluid
	Pleural fluid	Consolidation
Aorta		
	Abdominal aortic aneurysm	Aortic dissection
Renal and Male genito-urinary		
	Hydronephrosis	Renal parenchymal assessment e.g. cysts complex vs. simple cysts, masses
	Qualitative bladder volume	Quantitative bladder volume
		Testicular parenchymal assessment e.g. torsion, masses and cysts, fracture and epididymis
Hepato-biliary		
	Gallstones	Common bile duct assessment, Biliary pathology e.g. polyps,

		masses, emphysematous
		Liver – size, assessment of parenchyma for masses, disruption of internal architecture, portal venous thrombosis
Non-trauma abdomen		
		Pancreas – gross assessment for masses or changes in internal architecture
		Spleen – size, assessment of parenchyma for masses, disruption of internal architecture
Gastrointestinal		
		Appendix
		Hernia assessment
		Bowel obstruction or ileus
		Diverticulitis
		Pneumoperitoneum
Ocular		
	Undifferentiated vitreous chamber pathology	Retinal detachment Vitreous detachment
		Optic nerve sheath diameter
		Foreign body
		Lens dislocation
		Orbital emphysema
		Retro-bulbar hematoma
Obstetrics/gynecology		
Trans-abdominal		
	Identification of intrauterine pregnancy with fetal heart rate	1 st , 2 nd and 3 rd trimester gestational dating and presentation
	Identification of free fluid in pelvis	Placental location
Trans-vaginal		
	Identification of intrauterine pregnancy with fetal heart rate	1 st , 2 nd and 3 rd trimester gestational dating
	Identification of free fluid in the pelvis	Adnexal assessment for cysts or masses e.g. ectopic or tubo-ovarian abscess
		Ovarian torsion Uterine masses

Procedures		
	Central venous access	Evaluation of tubes – Foley, Gastrostomy-tube, Jejunostomy-tube
	Peripheral venous access	Arterial line placement
	Thoracentesis	Joint aspiration
	Paracentesis	Endo-tracheal tube confirmation
	Pericardiocentesis	Lumbar puncture
	Abscess drainage	Pacer wire placement
	Foreign body detection	
Venous/Arterial Assessment		
	Deep venous thrombosis evaluation - two region compression lower extremity	Deep venous thrombosis evaluation – upper extremity and neck
	Inferior vena cava evaluation	Doppler evaluation of arterial and venous structures
Soft Tissue		
	Abscess vs. cellulitis	Necrotizing fasciitis
	Foreign body detection	Peri-tonsillar abscess
Musculoskeletal		
		Assessment of bones and joints
		Assessment of tendons and ligaments
		Assessment of Muscles
Nerve blocks		
		Brachial plexus, forearm
		Intercostal, transversus abdominus
		Femoral, sciatic, tibial
Pediatrics		
	All appropriate imaging listed above	Hip evaluation
		Appendicitis
		Pylorus stenosis
		Intussusception
		Lumbar puncture
Head and Neck		
		Evaluation of neck masses for airway compromise
		Vocal cord assessment