



The SonoSim Ultrasound Training Ecosystem in Accordance with ABEM's Core Content of Advanced Emergency Medicine Ultrasonography

In 2023, the American Board of Emergency Medicine (ABEM) revised the [Advanced Emergency Medicine Ultrasonography \(AEMUS\) Core Content](#). This Core Content “aims to establish standardized education and qualifications necessary for AEMUS fellowship program leadership, clinical application, administration, quality improvement, and research.”¹

The patented SonoSim Ultrasound Training Ecosystem combines courses, hands-on scanning, performance assessment, learner study tools, and integration resources to support emergency medicine programs and professionals with:

- Comprehensive & standardized ultrasound exposure for every learner
- Flexible learning to fit into any residency or fellowship program
- Unlimited confidence-building practice in a risk-free environment

Image Acquisition & Interpretation Skills: Clinical Ultrasonography Fellow Core Content	
Curriculum Topic	SonoSim Content
Physics (Basic)	
Artifacts	Learn: • <i>Fundamentals of Ultrasound</i>: Imaging Artifacts Study: • <i>SPI Test Prep</i> > Perform Ultrasound Examinations > Sound and Matter Interactions I, IV-VI • <i>SPI Test Prep</i> > Optimize Sonographic Images > Greyscale Artifacts I & II • <i>SPI Test Prep</i> > Apply Doppler Concepts > Doppler III, IV, & VIII
Knobs	Learn: • <i>Fundamentals of Ultrasound</i>: Ultrasound System Operation Study: • <i>SPI Test Prep</i> > Manage Ultrasound Transducers > Ultrasound Beams I & II • <i>SPI Test Prep</i> > Optimize Sonographic Images > Focal Depth; Image Resolution I-IV
Planes	Learn: • <i>Fundamentals of Ultrasound</i>: Imaging Conventions • All Other SonoSim Courses
Properties of sound waves	
Background physics	Learn: • <i>Fundamentals of Ultrasound</i>: Basic Ultrasound Physics Study: • <i>SPI Test Prep</i> > Foundations Prep > Digital Information • <i>SPI Test Prep</i> > Perform Ultrasound Examinations > Sound Waves I-VI; Sound & Matter Interactions I-III; Ultrasound Attenuation I & II; Display Modes • <i>SPI Test Prep</i> > Optimize Sonographic Images > Sonography Basics; Sound Wave Characteristics I & II; Ultrasound Pulses I-VI; Focal Depth • <i>SPI Test Prep</i> > Apply Doppler Concepts > Hemodynamics I & II; Doppler I

¹Adhikari S, Leo M, Liu R, Johnston M, Keehbauch J, Barton M, Kendall J. The 2023 Core Content of advanced emergency medicine ultrasonography. *J Am Coll Emerg Physicians Open*. 2023 Aug 9;4(4):e13015. doi: 10.1002/emp2.13015

Display	Study: <i>SPI Test Prep</i> > Perform Ultrasound Examinations > Display Modes <i>SPI Test Prep</i> > Optimize Sonographic Images > Pulsed-Echo Instrumentation & Controls I & II; Display & Image Processing I & II
Image resolution	Learn: <i>Fundamentals of Ultrasound</i>: Ultrasound System Operation Study: <i>SPI Test Prep</i> > Foundations Prep > Digital Information <i>SPI Test Prep</i> > Perform Ultrasound Examinations > Sound & Matter Interactions VI <i>SPI Test Prep</i> > Manage Ultrasound Transducers > Transducer Construction <i>SPI Test Prep</i> > Optimize Sonographic Images > Focal Depth; Image Resolution I-IV
Transducers	Learn: <i>Fundamentals of Ultrasound</i>: Basic Ultrasound Physics, Imaging Conventions Study: <i>SPI Test Prep</i> > All "Manage Ultrasound Transducers" Quizzes <i>SPI Test Prep</i> > Optimize Sonographic Images > Sonography Basics
Ultrasound beam	Study: <i>SPI Test Prep</i> > Manage Ultrasound Transducers > Transducer Construction; Ultrasound Beams I & II; 2D Imaging
Miscellaneous	Study: <i>SPI Test Prep</i>

Curriculum Topic	SonoSim Content
Physics (Advanced)	
Aliasing	Learn: <i>Fundamentals of Ultrasound</i>: Imaging Artifacts <i>Liver Anatomy & Physiology</i>: Sonographic Technique <i>FoCUS Part I Advanced Clinical</i>: Doppler Ultrasound <i>FoCUS Part II Advanced Clinical</i>: Doppler Imaging Scan: - Aliasing found throughout various SonoSim Cases (see Case Features) Study: <i>SPI Test Prep</i> > Apply Doppler Concepts > Doppler II-IV, VIII-X; Color Doppler Imaging
Biological effects & safety	Learn: <i>Fundamentals of Ultrasound</i>: Infection Control & Biosafety Study: <i>SPI Test Prep</i> > Perform Ultrasound Examinations > Patient Care I & II <i>SPI Test Prep</i> > All "Provide Clinical Safety & Quality Assurance" Quizzes
Doppler techniques	
Color	Learn: <i>Fundamentals of Ultrasound</i>: Doppler-Mode Imaging Scan: - Color Doppler found throughout various SonoSim Cases (see Case Features) Study: <i>SPI Test Prep</i> > Apply Doppler Concepts > Doppler II, III, V, IX, & X; Color Doppler Imaging

Spectral	Learn: • <i>Fundamentals of Ultrasound: Doppler-Mode Imaging</i> Scan: • Spectral Doppler found throughout various SonoSim Cases (see Case Features) Study: • <i>SPI Test Prep</i> > Apply Doppler Concepts > Doppler IV, VI-X; Pulsed-Wave Doppler
Continuous wave Doppler	Learn: • <i>Fundamentals of Ultrasound: Doppler-Mode Imaging</i> Scan: • Continuous-wave Doppler found throughout various SonoSim Cases (see Case Features) Study: • <i>SPI Test Prep</i> > Apply Doppler Concepts > Doppler VI, VII, IX, & X
Tissue Doppler	Learn: • <i>Cardiac Chamber Quantification Advanced Clinical: Left Ventricle, Right Ventricle</i> Study: • <i>SPI Test Prep</i> > Perform Ultrasound Examinations > New Technologies
Miscellaneous	Study: • <i>SPI Test Prep</i>

Curriculum Topic	SonoSim Content
Cardiac (Basic)	
Cardiac arrest	Learn: • <i>eFAST Core Clinical: Case Studies</i> • <i>FAST Core Clinical: Case Studies</i> • <i>Resuscitative TEE Advanced Clinical: All Lessons</i> Apply: • SonoSim LiveScan® Cardiac Resuscitation Scenarios
Global left ventricular function	Learn: • <i>Heart Anatomy & Physiology: Sonographic Technique</i> • <i>Cardiology Core Clinical: Case Studies</i> • <i>RUSH Core Clinical: Sonographic Anatomy, Sonographic Technique</i> • <i>FoCUS Part II Advanced Clinical: Echocardiographic Technique</i> • <i>Cardiac Chamber Quantification Advanced Clinical: Left Ventricle</i> Scan: • Core Cardiology Cases • Core RUSH Cases • Advanced Cardiac Chamber Quantification Cases • Advanced FoCUS Part I & II Cases • Advanced LVAD Problem-Focused Echocardiography Cases • Advanced Resuscitative TEE Cases • Pericardiocentesis Cases Study: • <i>Question Bank</i> > Adult Echocardiography > LVADs > Case Studies AE-0200, AE-0800, & AE-1100 • <i>Question Bank</i> > Adult Echocardiography > RV/LV Heart Failure > Case Studies AE-2300 & AE-2500 • <i>Question Bank</i> > Adult Echocardiography > Valvular Heart Disease > Case Studies AE-0100, AE-1500, AE-1600, & AE-1700

Global right ventricular size	Learn: • <i>RUSH Core Clinical: Sonographic Anatomy, Sonographic Technique</i> • <i>Cardiac Chamber Quantification Advanced Clinical: Right Ventricle</i> Scan: • Core Cardiology Cases • Core RUSH Cases • Advanced Cardiac Chamber Quantification Cases • Advanced FoCUS Part I & II Cases Study: • <i>Question Bank</i> > Adult Echocardiography > Pulmonary Hypertension > Case Study AE-0900
Pericardial fluid	Learn: • <i>Cardiology Core Clinical: Case Studies</i> • <i>eFAST Core Clinical: Sonographic Anatomy & Technique, Case Studies</i> • <i>RUSH Core Clinical: Sonographic Anatomy, Sonographic Technique</i> • <i>Pericardiocentesis: All Lessons</i> Scan: • Core Cardiology Cases • Core RUSH Cases • Pericardiocentesis Cases Study: • <i>Question Bank</i> > Adult Echocardiography > Pericardial Disease > Case Studies AE-0300, AE-0400, AE-1200, & AE-2000
Tamponade physiology	Learn: • <i>Cardiology Core Clinical: Case Studies</i> • <i>RUSH Core Clinical: Case Studies</i> • <i>Pericardiocentesis: All Lessons</i> Scan: • Core Cardiology Cases • Core RUSH Cases • Advanced FoCUS Part I Cases • Pericardiocentesis Cases Study: • <i>Question Bank</i> > Adult Echocardiography > Pericardial Disease > Case Study AE-1300
Inferior vena cava	Learn: • <i>Aorta/IVC Anatomy & Physiology: All Lessons</i> • <i>Aorta/IVC Core Clinical: IVC Evaluation & CVP</i> • <i>Cardiology Core Clinical: IVC Window</i> • <i>RUSH Core Clinical: Sonographic Anatomy, Sonographic Technique</i> • <i>Cardiac Chamber Quantification Advanced Clinical: IVC</i> Scan: • Basic Aorta/IVC Cases • Core Aorta/IVC Cases • Core RUSH Cases • Advanced FoCUS Part I & II Cases Apply: • SonoSim LiveScan® Hepatobiliary Scenarios

Curriculum Topic	SonoSim Content
Cardiac (Advanced)	
Aortic root assessment	Learn: • <i>Cardiac Chamber Quantification Advanced Clinical: Aortic Root & Thoracic Aorta</i> Scan: • Basic Heart Cases • Core Cardiology Cases • Core RUSH Cases • Advanced FoCUS Part I & II Cases
Cardiac output assessment	Learn: • <i>FoCUS Part I Advanced Clinical: Cardiac Output Measurements</i> Scan: • Advanced FoCUS Part I & II Cases Study: • <i>Question Bank > Adult Echocardiography > LVADs > Case Studies AE-0200 & AE-1100</i> • <i>Question Bank > Adult Echocardiography > RV/LV Heart Failure > Case Studies AE-2200, AE-2300, & AE-2500</i>
Chamber size, pressure, & comparison	Learn: • <i>Heart Anatomy & Physiology: Heart Physiology</i> • <i>Cardiology Core Clinical: Sonographic Anatomy, Sonographic Technique, Case Studies</i> • <i>Cardiac Chamber Quantification Advanced Clinical: Left Ventricle, Right Ventricle, Left Atrium & Right Atrium</i> Scan: • Basic Heart Cases • Core Cardiology Cases • Core RUSH Cases • Advanced FoCUS Part I & II Cases Study: • <i>Question Bank > Adult Echocardiography > Valvular Heart Disease > Case Study AE-0600</i>
Regional wall motion abnormalities	Learn: • <i>Cardiac Chamber Quantification Advanced Clinical: Left Ventricle</i> Scan: • Core Cardiology Cases • Advanced FoCUS Part I & II Cases
Valvular assessment	Learn: • <i>Heart Anatomy & Physiology: Sonographic Technique</i> • <i>FoCUS Part II Advanced Clinical: All Lessons</i> Scan: • Basic Heart Cases • Core Cardiology Cases • Core RUSH Cases • Advanced FoCUS Part I & II Cases Study: • <i>Question Bank > Adult Echocardiography > All "Valvular Heart Disease" Quizzes</i>

Global right ventricular function	Learn: • <i>Heart Anatomy & Physiology: Sonographic Technique</i> • <i>Cardiac Chamber Quantification Advanced Clinical: Right Ventricle</i> Scan: • Core Cardiology Cases • Advanced FoCUS Part I & II Cases Study: • <i>Question Bank > Adult Echocardiography > Valvular Heart Disease > Case Study AE-0600</i>
Diastolic function	Learn: • <i>Heart Anatomy & Physiology: Sonographic Technique</i> • <i>Cardiology Core Clinical: Case Studies</i> • <i>FoCUS Part II Advanced Clinical: Echocardiographic Technique</i> • <i>Cardiac Chamber Quantification Advanced Clinical: Left Ventricle</i> Scan: • Core Cardiology Cases • Advanced FoCUS Part II Cases • Advanced Resuscitative TEE Cases • Pericardiocentesis Cases Study: • <i>Question Bank > Adult Echocardiography > All "Pericardial Disease" Quizzes</i> • <i>Question Bank > Adult Echocardiography > All "Pulmonary Hypertension" Quizzes</i> • <i>Question Bank > Adult Echocardiography > All "RV/LV Heart Failure" Quizzes</i> • <i>Question Bank > Adult Echocardiography > All "Valvular Heart Disease" Quizzes</i>
Transesophageal echocardiogram	Learn: • <i>Resuscitative TEE Advanced Clinical: All Lessons</i> Scan: • Advanced Resuscitative TEE Cases
Advanced Views	
Suprasternal notch	Learn: • <i>FoCUS Part I Advanced Clinical: Imaging Windows</i> • <i>FoCUS Part II Advanced Clinical: Echocardiographic Technique</i> Scan: • Core Cardiology Cases • Advanced FoCUS Part I & II Cases • Advanced LVAD Problem-Focused Echocardiography Cases

Right ventricular outflow	Learn: • <i>Cardiology Core Clinical: Case Studies</i> • <i>FoCUS Part II Advanced Clinical: Echocardiographic Technique, Doppler Imaging</i> • <i>Cardiac Chamber Quantification Advanced Clinical: Right Ventricle</i> Scan: • Basic Heart Cases • Core Cardiology Cases • Advanced FoCUS Part I & II Cases • Advanced Resuscitative TEE Cases Study: • <i>Question Bank > Adult Echocardiography > All "Pulmonary Hypertension" Quizzes</i> • <i>Question Bank > Adult Echocardiography > RV/LV Heart Failure > Case Studies AE-2300 & AE-2500</i> • <i>Question Bank > Adult Echocardiography > Valvular Heart Disease > Case Studies AE-0600, AE-1500, & AE-1700</i>
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Curriculum Topic	SonoSim Content
Chest & Lung (Basic)	
Pleural fluid	Learn: • <i>Cardiology Core Clinical: Case Studies</i> • <i>Pulmonary Core Clinical: Pleural Effusion</i> • <i>Pediatric Lung Sonography Advanced Clinical: Sonographic Anatomy, Case Studies</i> Scan: • Core Pulmonary Cases • Advanced Pediatric Lung Sonography Cases • Pediatric Challenge Cases • Pulmonary Challenge Cases Study: • <i>Question Bank > Chest > Pulmonary > Case Study PULM-0100</i>
Pneumothorax	Learn: • <i>eFAST Core Clinical: Sonographic Anatomy, Sonographic Technique, Case Studies</i> • <i>Pulmonary Core Clinical: Pneumothorax Rule-Out, Pneumothorax Rule-In</i> • <i>Pediatric Lung Sonography Advanced Clinical: Sonographic Anatomy, Case Studies</i> Scan: • Core eFAST Cases • Core Pulmonary Cases • Advanced Pediatric Lung Sonography Cases Study: • <i>Question Bank > Chest > Pulmonary > Case Study PULM-0400</i> Apply: • SonoSim LiveScan® Cardiac Resuscitation & Trauma Care Scenarios
Alveolar interstitial syndrome	Learn: • <i>Pulmonary Core Clinical: Alveolar Interstitial Syndrome</i> • <i>Pediatric Lung Sonography Advanced Clinical: Sonographic Anatomy, Case Studies</i> Scan: • Core Pulmonary Cases • Advanced Pediatric Lung Sonography Cases • Thoracentesis Cases • Pediatric Challenge Cases • Pulmonary Challenge Cases

Curriculum Topic	SonoSim Content
Chest & Lung (Advanced)	
Consolidation	Learn: • <i>Pulmonary Core Clinical: Case Studies – Lung Consolidation</i> • <i>Pediatric Lung Sonography Advanced Clinical: Sonographic Anatomy, Case Studies</i> Scan: • Core Pulmonary Cases • Advanced Pediatric Lung Sonography Cases • Thoracentesis Cases • Pediatric Challenge Cases • Pulmonary Challenge Cases
Pleural disease	Learn: • <i>Pulmonary Core Clinical: Case Studies – Alveolar Interstitial Syndrome, Case Studies – Lung Consolidation</i> Scan: • Core Pulmonary Cases • Advanced Pediatric Lung Sonography Cases • Thoracentesis Cases Study: • <i>Question Bank > Chest > Pulmonary > Case Studies PULM-0100 & PULM-0400</i>
Pulmonary edema	Learn: • <i>Pulmonary Core Clinical: Case Studies – Alveolar Interstitial Syndrome</i> • <i>Pediatric Lung Sonography Advanced Clinical: Sonographic Anatomy, Case Studies</i> Scan: • Core Pulmonary Cases • Core RUSH Cases • Advanced Pediatric Lung Sonography Cases • Pediatric Challenge Cases Study: • <i>Question Bank > Chest > Pulmonary > Case Study PULM-0100</i>
Pneumonia	Learn: • <i>Pulmonary Core Clinical: Case Studies – Alveolar Interstitial Syndrome, Case Studies – Lung Consolidation</i> • <i>Pediatric Lung Sonography Advanced Clinical: Sonographic Anatomy, Case Studies</i> Scan: • Core Pulmonary Cases • Core RUSH Cases • Advanced Pediatric Lung Sonography Cases • Thoracentesis Cases • Pulmonary Challenge Cases
Atelectasis	Learn: • <i>Pulmonary Core Clinical: Sonographic Anatomy, Case Studies – Alveolar Interstitial Syndrome, Case Studies – Lung Consolidation</i> • <i>Pediatric Lung Sonography Advanced Clinical: Sonographic Anatomy, Case Studies</i> Scan: • Advanced Pediatric Lung Sonography Cases • Advanced Resuscitative TEE Cases • Pediatric Challenge Cases

Diaphragm	Learn: • <i>Lungs Anatomy & Physiology</i>: Sonographic Anatomy • <i>Pulmonary Core Clinical</i>: Case Studies – Pleural Effusion • <i>Pediatric Lung Sonography Advanced Clinical</i>: Sonographic Anatomy, Case Studies Scan: • Basic Lungs Cases • Core eFAST Cases • Core Pulmonary Cases • Advanced Pediatric Lung Sonography Cases • Thoracentesis Cases • Pulmonary Challenge Cases
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Curriculum Topic	SonoSim Content
Aorta (Basic)	
Abdominal aortic aneurysm	Learn: • <i>Aorta/IVC Core Clinical</i>: All Lessons • <i>RUSH Core Clinical</i>: Sonographic Anatomy, Sonographic Technique, Case Studies Scan: • Core Aorta/IVC Cases • Core RUSH Cases • Vascular Challenge Cases Study: • <i>Question Bank</i> > Vascular > Aorta > Case Study AO-0100 Apply: • SonoSim LiveScan® Critical Care Scenarios
Abdominal aortic branches	Learn: • <i>Aorta/IVC Anatomy & Physiology</i>: Sonographic Anatomy, Sonographic Technique • <i>Renal Anatomy & Physiology</i>: Sonographic Technique • <i>Aorta/IVC Core Clinical</i>: Anatomy • <i>RUSH Core Clinical</i>: Sonographic Technique, Imaging Tips & Pitfalls • <i>FoCUS Part I Advanced Clinical</i>: Imaging Techniques Scan: • Basic Aorta/IVC Cases • Core Aorta/IVC Cases • Core RUSH Cases • Vascular Challenge Cases

Curriculum Topic	SonoSim Content
Aorta (Advanced)	
Aortic dissection	Learn: • <i>Aorta/IVC Core Clinical</i>: Case Studies • <i>FoCUS Part I Advanced Clinical</i>: Imaging Windows • <i>Resuscitative TEE Advanced Clinical</i>: Case Studies Scan: • Core Aorta/IVC Cases • Core Cardiology Cases Apply: • SonoSim LiveScan® Cardiac Resuscitation Scenarios

Periaortic structures (veins, lymph, etc.)	Learn: • <i>GI Tract Anatomy & Physiology</i>: All Lessons • <i>Liver Anatomy & Physiology</i>: All Lessons • <i>Pancreas Anatomy & Physiology</i>: All Lessons • <i>Renal Anatomy & Physiology</i>: All Lessons • <i>Spleen Anatomy & Physiology</i>: All Lessons Scan: • Basic GI Tract Cases • Basic Liver Cases • Basic Pancreas Cases • Basic Renal Cases • Basic Spleen Cases
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Curriculum Topic	SonoSim Content
Renal (Basic)	
Hydronephrosis	Learn: • <i>Renal Core Clinical</i>: Obstructive Uropathy, Case Studies Scan: • Core Renal Cases • Genitourinary Challenge Cases Study: • <i>Question Bank</i> > Abdomen > Kidneys & Ureter > Case Study REN-0200 Apply: • SonoSim LiveScan® Genitourinary Scenarios
Bladder volume	Learn: • <i>Bladder Anatomy & Physiology</i>: Bladder Volume Measurement • <i>Bladder Core Clinical</i>: Bladder Volume Measurement Scan: • Basic Bladder Cases • Core Bladder Cases • Core Renal Cases • Genitourinary Challenge Cases Apply: • SonoSim LiveScan® Genitourinary Scenarios

Curriculum Topic	SonoSim Content
Renal (Advanced)	
Masses	Learn: • <i>Renal Core Clinical</i>: Case Studies • <i>Renal Transplant Advanced Clinical</i>: Case Studies

Renal vessel assessment	Learn: • <i>Renal Anatomy & Physiology: Sonographic Technique</i> • <i>Renal Transplant Advanced Clinical: Sonographic Anatomy & Technique, Case Studies</i> Scan: • Basic Renal Cases • Core Renal Cases • Advanced Renal Transplant Cases • Abdomen Challenge Cases • Genitourinary Challenge Cases Apply: • SonoSim LiveScan® Genitourinary Scenarios
Renal parenchymal assessment	Learn: • <i>Renal Anatomy & Physiology: Sonographic Anatomy</i> • <i>Renal Core Clinical: Sonographic Anatomy, Obstructive Uropathy</i> • <i>Renal Transplant Advanced Clinical: Sonographic Anatomy & Technique, Case Studies</i> Scan: • Basic Renal Cases • Core Renal Cases • Advanced Renal Transplant Cases • Abdomen Challenge Cases • Genitourinary Challenge Cases Apply: • SonoSim LiveScan® Genitourinary Scenarios
Renal transplant	Learn: • <i>Renal Transplant Advanced Clinical: All Lessons</i> Scan: • Advanced Renal Transplant Cases • Genitourinary Challenge Cases Study: • <i>Question Bank > Abdomen > Kidneys & Ureter > Case Studies REN-0400, REN-0500, & REN-0800</i>
Renal size	Learn: • <i>Renal Anatomy & Physiology: Anatomy</i> • <i>Renal Core Clinical: Anatomy</i> Scan: • Basic Renal Cases • Core Renal Cases • Advanced Renal Transplant Cases • Abdomen Challenge Cases • Genitourinary Challenge Cases Study: • <i>Question Bank > New Case Study Coming Soon</i> Apply: • SonoSim LiveScan® Genitourinary Scenarios

Cysts	
Simple	Learn: - Renal Core Clinical: Case Studies Scan: - Core Renal Cases - Abdomen Challenge Cases - Genitourinary Challenge Cases
Complex	Learn: - Renal Core Clinical: Case Studies Scan: - Core Intestinal/Biliary Cases - Abdomen Challenge Cases
Stone assessment	
Ureteral jets	Learn: - Renal Anatomy & Physiology: Sonographic Technique - Bladder Core Clinical: Case Pathologies - Renal Core Clinical: Sonographic Technique Scan: - Basic Bladder Cases - Basic Renal Cases - Core Renal Cases - Abdomen Challenge Cases
Twinkling artifact	Scan: - Genitourinary Challenge Cases Study: - Question Bank > New Case Study Coming Soon
Curriculum Topic	SonoSim Content
Male Genitourinary (Basic & Advanced)	
Scrotum and scrotal contents	
Abscess & cellulitis	Scan: Genitourinary Challenge Cases
Hydrocele	Learn: - Scrotum Anatomy & Physiology: Sonographic Anatomy Scan: - Genitourinary Challenge Cases
Varicocele	Scan: - Basic Scrotum Cases Study: - Question Bank > New Case Study Coming Soon
Epididymo-orchitis	Study: Question Bank > New Case Study Coming Soon

Testicle	
Cysts	Scan: Genitourinary Challenge Cases
Hernia	Study: <i>Question Bank</i> > New Case Study Coming Soon
Parenchymal assessment	Learn: <i>Scrotum Anatomy & Physiology</i>: Sonographic Anatomy, Sonographic Technique Scan: - Basic Scrotum Cases - Genitourinary Challenge Cases

Curriculum Topic	SonoSim Content
Hepatobiliary (Basic)	
Cholelithiasis	Learn: <i>Intestinal/Biliary Core Clinical</i>: Sonographic Anatomy, Case Studies Scan: - Core Intestinal/Biliary Cases - Abdomen Challenge Cases Study: <i>Question Bank</i> > Abdomen > Gallbladder & Biliary Tract > Case Study GB-0200 Apply: - SonoSim LiveScan® Early Stage Pregnancy, Hepatobiliary, & Late Stage Pregnancy Scenarios
Cholecystitis	Learn: <i>Intestinal/Biliary Core Clinical</i>: Sonographic Anatomy, Case Studies Scan: - Core Intestinal/Biliary Cases - Core RUSH Cases - Abdomen Challenge Cases Study: <i>Question Bank</i> > Abdomen > Gallbladder & Biliary Tract > Case Studies GB-0100 & GB-0300 Apply: - SonoSim LiveScan® Early Stage Pregnancy, Hepatobiliary, & Late Stage Pregnancy Scenarios
Choledocholithiasis	Learn: <i>Intestinal/Biliary Core Clinical</i>: Case Studies Scan: - Abdomen Challenge Cases

Curriculum Topic	SonoSim Content
Hepatobiliary (Advanced)	
Portal vein Doppler	Learn: <i>Liver Anatomy & Physiology</i>: Sonographic Technique Scan: - Basic Liver Cases - Abdomen Challenge Cases Study: <i>Question Bank</i> > New Case Study Coming Soon

Portal venous thrombosis	Scan: - Abdomen Challenge Cases Study: Question Bank > New Case Study Coming Soon
Intraductal dilation	Learn: <i>Intestinal/Biliary Core Clinical: Sonographic Technique, Case Studies</i> Scan: - Core Intestinal/Biliary Cases - Abdomen Challenge Cases Study: Question Bank > New Case Study Coming Soon Apply: - SonoSim LiveScan® Hepatobiliary Scenarios
Gallbladder & Biliary Tree	
Ductal assessment	Learn: <i>Biliary Tree Anatomy & Physiology: Sonographic Technique</i> <i>Intestinal/Biliary Core Clinical: Sonographic Anatomy, Sonographic Technique, Case Studies</i> Scan: - Basic Biliary Tree Cases - Core Intestinal/Biliary Cases - Abdomen Challenge Cases Study: Question Bank > Abdomen > Gallbladder & Biliary Tract > Case Study GB-0100 Apply: - SonoSim LiveScan® Hepatobiliary Scenarios
Masses	Learn: <i>Intestinal/Biliary Core Clinical: Case Studies</i>
Polyps	Learn: <i>Intestinal/Biliary Core Clinical: Case Studies</i> Study: Question Bank > Abdomen > Bladder & Lower Urinary Tract > Case Study BLD-0200 Apply: - SonoSim LiveScan® Hepatobiliary Scenarios
Sludge	Learn: <i>Intestinal/Biliary Core Clinical: Sonographic Anatomy, Case Studies</i> Scan: - Core Intestinal/Biliary Cases - Core RUSH Cases - Abdomen Challenge Cases Study: Question Bank > Abdomen > Gallbladder & Biliary Tract > Case Studies GB-0100 & GB-0300
Wall assessment: Adenomyomatosis	Study: Question Bank > New Case Study Coming Soon

Wall assessment: global & focal wall thickening	Learn: • <i>Intestinal/Biliary Core Clinical: Sonographic Anatomy, Case Studies</i> Scan: • Core Intestinal/Biliary Cases • Abdomen Challenge Cases Study: • <i>Question Bank</i> > Abdomen > Gallbladder & Biliary Tract > Case Study GB-0100 • <i>Question Bank</i> > New Case Study Coming Soon
Wall assessment: pericholecystic abnormalities	Learn: • <i>Intestinal/Biliary Core Clinical: Case Studies</i> Scan: • Core Intestinal/Biliary Cases Study: • <i>Question Bank</i> > Abdomen > Gallbladder & Biliary Tract > Case Study GB-0100 Apply: • SonoSim LiveScan® Hepatobiliary Scenarios
Liver	
Cysts	Scan: • Core Intestinal/Biliary Cases • Core Renal Cases Study: • <i>Question Bank</i> > New Case Study Coming Soon
Pneumobilia	Learn: • <i>Intestinal/Biliary Core Clinical: Case Studies</i>
Parenchymal assessment	Learn: • <i>Liver Anatomy & Physiology: Sonographic Anatomy</i> Scan: • Basic Liver Cases • Abdomen Challenge Cases • Genitourinary Challenge Cases • Protocol Challenge Cases Study: • <i>Question Bank</i> > New Case Study Coming Soon

Curriculum Topic	SonoSim Content
Other Abdomen, Trauma (see Integrated Examinations section, page 29)	
Other Abdomen, Non-Trauma (Basic)	
Peritoneal fluid assessment	Learn: • <i>Intestinal/Biliary Core Clinical: Case Studies</i> • <i>Paracentesis: Introduction, Sonographic Anatomy, Procedure Preparation</i> Scan: • Core Pulmonary Cases • Paracentesis Cases • Abdomen Challenge Cases Study: • <i>Question Bank</i> > Abdomen > Gastrointestinal > Case Study GI-0200

Curriculum Topic	SonoSim Content
Other Abdomen, Non-Trauma (Advanced)	
Appendix	Learn: <i>GI Tract Anatomy & Physiology</i>: Sonographic Anatomy, Sonographic Technique <i>Intestinal/Biliary Core Clinical</i>: Sonographic Anatomy, Sonographic Technique, Case Studies, Imaging Tips & Pitfalls Scan: - Basic GI Tract Cases - Core Intestinal/Biliary Cases - Abdomen Challenge Cases Study: <i>Question Bank</i> > Abdomen > Gastrointestinal > Case Study GI-0100
Gastric ultrasound	
Pyloric stenosis	Study: <i>Question Bank</i> > New Case Study Coming Soon
Bowel	
Intussusception	Learn: <i>Intestinal/Biliary Core Clinical</i>: Sonographic Anatomy, Case Studies Study: <i>Question Bank</i> > New Case Study Coming Soon
Obstruction	Learn: <i>Intestinal/Biliary Core Clinical</i>: Case Studies Scan: - Core Intestinal/Biliary Cases - Abdomen Challenge Cases Study: <i>Question Bank</i> > Abdomen > Gastrointestinal > Case Study GI-0200
Spleen	
Disruption of internal architecture	Study: <i>Question Bank</i> > New Case Study Coming Soon
Parenchymal assessment	Learn: <i>Spleen Anatomy & Physiology</i>: Sonographic Anatomy, Sonographic Technique Scan: - Basic Spleen Cases - Paracentesis Cases - Abdomen Challenge Cases Study: <i>Question Bank</i> > New Case Study Coming Soon Apply: - SonoSim LiveScan® Hepatobiliary Scenarios

Splenic size	Learn: • <i>Spleen Anatomy & Physiology: Anatomy</i> Scan: • Basic Spleen Cases • Paracentesis Cases • Abdomen Challenge Cases Apply: • SonoSim LiveScan® Hepatobiliary Scenarios
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Curriculum Topic	SonoSim Content
Ocular (Basic)	
Retinal detachment	Learn: • <i>Ocular Core Clinical: Anatomy, Retinal Detachment</i> Scan: • Core Ocular Cases Apply: • SonoSim LiveScan® Ocular Scenarios
Vitreous Assessment	
Detachment	Learn: • <i>Ocular Core Clinical: Anatomy, Vitreous Detachment</i> Scan: • Core Ocular Cases
Hemorrhage	Learn: • <i>Ocular Core Clinical: Anatomy, Vitreous Hemorrhage</i> Scan: • Core Ocular Cases Apply: • SonoSim LiveScan® Ocular Scenarios

Curriculum Topic	SonoSim Content
Ocular (Advanced)	
Foreign body	Learn: • <i>Ocular Core Clinical: Ocular Trauma</i> Scan: • Ocular Cases Apply: • SonoSim LiveScan® Ocular Scenarios
Lens dislocation	Learn: • <i>Ocular Core Clinical: Ocular Trauma</i>
Optic nerve sheath diameter	Learn: • <i>Ocular Core Clinical: Optic Nerve Evaluation & ICP</i> Scan: • Ocular Cases • Ocular Challenge Cases Apply: • SonoSim LiveScan® Ocular Scenarios

Pupillary assessment	Study: Question Bank > New Case Study Coming Soon
Globe rupture	Learn: Ocular Core Clinical: Ocular Trauma
Abscess	Learn: Nonmalignant Adnexal Conditions Advanced Clinical: Tubo-Ovarian Abscess

Curriculum Topic	SonoSim Content
Female Pelvis, Transabdominal and/or Transvaginal Approaches	
Simple cysts	Learn: - Malignant Adnexal Conditions Advanced Clinical: Sonographic Classification of Adnexal Masses - Nonmalignant Adnexal Conditions Advanced Clinical: Ovarian Cysts, Peritoneal Inclusion Cyst & Paraovarian Cyst Scan: - Core OB/GYN Cases - Advanced Nonmalignant Adnexa Cases - GYN Challenge Cases
Gynecology, adnexa (advanced)	
Abscess	Learn: Nonmalignant Adnexal Conditions Advanced Clinical: Tubo-Ovarian Abscess
Cysts	Learn: - OB/GYN Core Clinical: Case Studies - Malignant Adnexal Conditions Advanced Clinical: Sonographic Classification of Adnexal Masses - Nonmalignant Adnexal Conditions Advanced Clinical: Ovarian Cysts, Peritoneal Inclusion Cyst & Paraovarian Cyst Scan: - Core OB/GYN Cases - Advanced Malignant Adnexa Cases - Advanced Nonmalignant Adnexa Cases - GYN Challenge Cases Study: - Question Bank > Obstetrics & Gynecology > Gynecology > Case Study GYN-0200
Masses	Learn: - Malignant Adnexal Conditions Advanced Clinical: All Lessons - Nonmalignant Adnexal Conditions Advanced Clinical: Pedunculated Leiomyoma Scan: - Advanced Malignant Adnexa Cases - Advanced Nonmalignant Adnexa Cases
Torsion	Learn: - Nonmalignant Adnexal Conditions Advanced Clinical: Adnexal Torsion Apply: - SonoSim LiveScan® Early Stage Pregnancy Scenarios

Gynecology, uterus (advanced)	
Cysts	Learn: • <i>Nonmalignant Adnexal Conditions Advanced Clinical: Sonographic Technique</i> Scan: • Core OB/GYN Cases • Advanced Normal Uterus Cases
Endometrioma	Learn: • <i>Nonmalignant Adnexal Conditions Advanced Clinical: Ovarian Cysts</i> Scan: • Advanced Malignant Adnexa Cases • Advanced Nonmalignant Adnexa Cases
Masses	Learn: • <i>Nonpregnant Abnormal Uterus Part I Advanced Clinical: Adenomyosis, Leiomyomas</i> • <i>Nonpregnant Abnormal Uterus Part II Advanced Clinical: Endometrial Polyps & Submucosal Leiomyomas, Retained Products of Conception, Endometrial Cancer & Endometrial Hyperplasia</i> Scan: • Advanced Abnormal Uterus Part I & II Cases • GYN Challenge Cases
Obstetrics, first trimester assessment (basic)	
Intrauterine pregnancy: gestational sac	Learn: • <i>OB/GYN Core Clinical: Embryology, Pathologic Conditions</i> • <i>First-Trimester Pregnancy Advanced Clinical: First-Trimester Pregnancy Ultrasound, Pregnancy Dating Using Ultrasound, Detecting Pregnancy Failure, Pathologic Conditions, Special Scenarios</i> Scan: • Core OB/GYN Cases • Advanced First-Trimester Pregnancy Cases • OB Challenge Cases Apply: • SonoSim LiveScan® Early Stage Pregnancy Scenarios
Intrauterine pregnancy: yolk sac	Learn: • <i>OB/GYN Core Clinical: Embryology, Pathologic Conditions</i> • <i>First-Trimester Pregnancy Advanced Clinical: First-Trimester Pregnancy Ultrasound, Detecting Pregnancy Failure, Special Scenarios</i> Scan: • Core OB/GYN Cases • Advanced First-Trimester Pregnancy Cases • OB Challenge Cases Apply: • SonoSim LiveScan® Early Stage Pregnancy Scenarios
Intrauterine pregnancy: fetal heart rate	Learn: • <i>OB/GYN Core Clinical: Embryology</i> • <i>First-Trimester Pregnancy Advanced Clinical: General Considerations, First-Trimester Pregnancy Ultrasound</i> Scan: • Core OB/GYN Cases • Advanced First-Trimester Pregnancy Cases • OB Challenge Cases

Obstetrics, first trimester assessment (advanced)

Anembryonic pregnancy	Learn: • <i>OB/GYN Core Clinical: Pathologic Conditions</i>
Fetal dating	Learn: • <i>OB/GYN Core Clinical: Embryology</i> • <i>First-Trimester Pregnancy Advanced Clinical: Pregnancy Dating Using Ultrasound</i> Scan: • Core OB/GYN Cases • Advanced First-Trimester Pregnancy Cases • OB Challenge Cases Apply: • SonoSim LiveScan® Early Stage Pregnancy Scenarios
Subchorionic hemorrhage	Learn: • <i>OB/GYN Core Clinical: Pathologic Conditions</i> • <i>First-Trimester Pregnancy Advanced Clinical: Pathologic Conditions</i> Scan: • OB Challenge Cases
Fetal demise	Learn: • <i>OB/GYN Core Clinical: Pathologic Conditions</i> • <i>First-Trimester Pregnancy Advanced Clinical: Detecting Pregnancy Failure</i> Scan: • OB Challenge Cases
Spontaneous abortion	Scan: • Core OB/GYN Cases
Retained products of conception	Learn: • <i>Abnormal Uterus Part II Advanced Clinical: Retained Products of Conception</i> Scan: • Core OB/GYN Cases • Advanced Abnormal Uterus Part II Cases Study: • <i>Question Bank > New Case Study Coming Soon</i> Apply: • SonoSim LiveScan® Early Stage Pregnancy Scenarios
Ectopic pregnancy	Learn: • <i>OB/GYN Core Clinical: Pathologic Conditions</i> • <i>First-Trimester Pregnancy Advanced Clinical: Detecting Pregnancy Failure, Pathologic Conditions</i> Scan: • Core OB/GYN Cases • Advanced First-Trimester Pregnancy Cases Study: • <i>Question Bank > New Case Study Coming Soon</i> Apply: • SonoSim LiveScan® Early Stage Pregnancy Scenarios

Molar pregnancy	Learn: • <i>OB/GYN Core Clinical: Case Studies</i> • <i>First-Trimester Pregnancy Advanced Clinical: Pathologic Conditions</i> Study: • <i>Question Bank > New Case Study Coming Soon</i>
Obstetrics, second & third trimester assessment (advanced)	
Amniotic fluid assessment	Learn: • <i>Six-Step Obstetric Examination Core Clinical: All Lessons</i> • <i>Second- & Third-Trimester Pregnancy Part II Advanced Clinical: Assessment of Extrafetal Anatomy, Amniotic Fluid Assessment, Biophysical Profile</i> Scan: • Core Six-Step Obstetric Exam Cases • Advanced Second- & Third-Trimester Pregnancy Part II Cases Apply • SonoSim LiveScan® Late Stage Pregnancy Scenarios
Fetal dating	Learn: • <i>Six-Step Obstetric Examination Core Clinical: All Lessons</i> • <i>Second- & Third-Trimester Pregnancy Part I Advanced Clinical: Fetal Biometry & Pregnancy Dating</i> Scan: • Core Six-Step Obstetric Exam Cases • Advanced Second- & Third-Trimester Pregnancy Part I & II Cases Apply: • SonoSim LiveScan® Late Stage Pregnancy Scenarios
Placental location	Learn: • <i>Six-Step Obstetric Examination Core Clinical: All Lessons</i> • <i>Second- & Third-Trimester Pregnancy Part II Advanced Clinical: Placental Evaluation</i> Scan: • Core Six-Step Obstetric Exam Cases • Advanced Second- & Third-Trimester Pregnancy Part II Cases Apply: • SonoSim LiveScan® Late Stage Pregnancy Scenarios
Curriculum Topic	SonoSim Content
Procedures (Basic)	
Abscess drainage	Study: • <i>Question Bank > New Case Study Coming Soon</i>
Foreign body removal	Study: • <i>Question Bank > New Case Study Coming Soon</i>
Paracentesis	Learn: • <i>Paracentesis: All Lessons</i> Scan: • Paracentesis Cases

Pericardiocentesis	Learn: • <i>Pericardiocentesis</i>: All Lessons Scan: • Pericardiocentesis Cases
Thoracentesis	Learn: • <i>Thoracentesis</i>: All Lessons Scan: • Thoracentesis Cases
Vascular access	Learn: • <i>Peripheral Venous Access</i>: All Lessons • <i>Femoral Line Placement</i>: All Lessons • <i>Internal Jugular Vein Cannulation</i>: All Lessons • <i>Subclavian Vein Cannulation</i>: All Lessons Scan: • Peripheral Venous Access Cases • Femoral Line Placement Cases • Internal Jugular Vein Cannulation Cases • Subclavian Vein Cannulation Cases
Arthrocentesis	Learn: • <i>Acromioclavicular Joint Injection & Aspiration</i>: All Lessons • <i>Glenohumeral Joint Injection & Aspiration</i>: All Lessons • <i>Metatarsophalangeal Joint Injection & Aspiration</i>: All Lessons • <i>Subacromial-Subdeltoid Bursa Injection & Aspiration</i>: All Lessons • <i>Tibiotalar Joint Injection & Aspiration</i>: All Lessons Scan: • Acromioclavicular Joint Injection & Aspiration Cases • Glenohumeral Joint Injection & Aspiration Cases • Metatarsophalangeal Joint Injection & Aspiration Cases • Subacromial-Subdeltoid Bursa Injection & Aspiration Cases • Tibiotalar Joint Injection & Aspiration Cases

Curriculum Topic	SonoSim Content
Procedures (Advanced)	
Endotracheal tube evaluation	Learn: • <i>Airway Core Clinical</i>: All Lessons Scan: • Core Airway Cases
Lumbar puncture	Learn: • <i>Neonatal & Infant Lumbar Puncture</i>: All Lessons Scan: • Neonatal & Infant Lumbar Puncture Cases
Cricothyrotomy	Learn: • <i>Airway Core Clinical</i>: Sonographic Technique

Guiding and verifying tube and catheter placement	
Foley	Learn: • <i>Bladder Core Clinical: Case Pathologies, Catheterization</i> Scan: • Core Bladder Cases • Core eFAST Cases • Core RUSH Cases Study: • <i>Question Bank > New Case Study Coming Soon</i> Apply: • SonoSim LiveScan® Critical Care & Trauma Care Scenarios
Midline catheter	Study • <i>Question Bank > New Case Study Coming Soon</i>

Curriculum Topic	SonoSim Content
Venous/Arterial Assessment (Basic)	
Deep venous thrombosis lower extremity	Learn: • <i>DVT – Lower Extremity Core Clinical: All Lessons</i> • <i>RUSH Core Clinical: All Lessons</i> Scan: • Core DVT – Lower Extremity Cases • Core RUSH Cases Study: • <i>Question Bank > Vascular > Lower Extremity Venous > Case Study LEV-0100</i> Apply: • SonoSim LiveScan® Critical Care Scenarios
Inferior vena cava	Learn: • <i>Aorta/IVC Anatomy & Physiology: All Lessons</i> • <i>Aorta/IVC Core Clinical: IVC Evaluation & CVP</i> • <i>FoCUS Part I Advanced Clinical: Pulmonary Artery Pressure Measurements</i> Scan: • Basic Aorta/IVC Cases • Core Aorta/IVC Cases • Core Cardiology Cases • Core eFAST Cases • Core RUSH Cases • Advanced FoCUS Part I & II Cases • Pericardiocentesis Cases • Abdomen Challenge Cases • Pediatric Challenge Cases • Vascular Challenge Cases Apply: • SonoSim LiveScan® Cardiac Resuscitation, Critical Care, & Trauma Care Scenarios

Curriculum Topic	SonoSim Content
Venous/Arterial Assessment (Advanced)	
Deep vein thrombosis neck	Study: Question Bank > New Case Study Coming Soon
Deep vein thrombosis upper extremity	Study: Question Bank > New Case Study Coming Soon
Peripheral vein thrombophlebitis	Study: Question Bank > New Case Study Coming Soon
Doppler evaluation	
Arterial Doppler assessment	Learn: - Arm-Arterial Anatomy & Physiology: Sonographic Anatomy, Sonographic Technique - Aorta/IVC Anatomy & Physiology: Sonographic Anatomy, Sonographic Technique - Leg-Arterial Anatomy & Physiology: Sonographic Anatomy, Sonographic Technique - Predialysis Vascular Mapping Advanced Clinical: Sonographic Anatomy, Sonographic Technique Scan: - Arterial Doppler assessment found throughout various SonoSim Cases (see Case Features) Study: - Question Bank > Vascular > Aorta > Case Study AO-0100
Pseudoaneurysm	Learn: - Renal Transplant Advanced Clinical: Case Studies Study: - Question Bank > New Case Study Coming Soon
Arteriovenous fistula	Learn: - Predialysis Vascular Mapping Advanced Clinical: All Lessons Scan: - Advanced Predialysis Vascular Mapping Cases Study: - Question Bank > New Case Study Coming Soon

Curriculum Topic	SonoSim Content
Soft Tissue (Basic)	
Abscess	Learn: - Soft Tissue Core Clinical: Sonographic Anatomy, Sonographic Technique, Advanced Abscess Evaluation, Peritonsillar Abscess, Case Studies - Renal Transplant Advanced Clinical: Case Studies Scan: - Core Soft Tissue Cases - Musculoskeletal Challenge Cases Study: - Question Bank > Musculoskeletal > Soft Tissue > Case Studies SFT-0200 & SFT-0400

Cellulitis	Learn: • <i>Soft Tissue Core Clinical: Sonographic Anatomy, Sonographic Technique, Advanced Abscess Evaluation</i> Scan: • Core Soft Tissue Cases • Genitourinary Challenge Cases • Musculoskeletal Challenge Cases
Foreign body detection	Learn: • <i>Soft Tissue Core Clinical: Sonographic Anatomy, Foreign Bodies, Case Studies</i> Scan: • Core Soft Tissue Cases

Curriculum Topic	SonoSim Content
Soft Tissue (Advanced)	
Fasciitis	Learn: • <i>Plantar Intrafascial & Perifascial Injections: Introduction, Sonographic Anatomy and Technique</i> Scan: • Musculoskeletal Challenge Cases Study: • <i>Question Bank</i> > New Case Study Coming Soon
Lymph node assessment	Learn: • <i>Soft Tissue Core Clinical: Sonographic Anatomy, Peritonsillar Abscess</i> • <i>Peripheral Vein Access: Sonographic Anatomy</i> Scan: • Core Soft Tissue Cases Study: • <i>Question Bank</i> > Musculoskeletal > Soft Tissue > Case Study SFT-0500 • <i>Question Bank</i> > New Case Study Coming Soon
Soft tissue Masses	Study: • <i>Question Bank</i> > Musculoskeletal > Soft Tissue > Case Studies SFT-0100 & SFT-0400

Curriculum Topic	SonoSim Content
Musculoskeletal (Basic)	
Effusion	Learn: • <i>Musculoskeletal Core Clinical: Sonographic Technique, Case Studies</i> • <i>Acromioclavicular Joint Injection & Aspiration: Sonographic Anatomy & Technique</i> • <i>Biceps Tendon Sheath Injection: Sonographic Anatomy & Technique</i> • <i>Metatarsophalangeal Joint Injection & Aspiration: Sonographic Anatomy & Technique</i> • <i>Tibiotalar Joint Injection & Aspiration: Sonographic Anatomy & Technique</i> Scan: • Core Musculoskeletal Cases • Musculoskeletal Challenge Cases • Pediatric Challenge Cases Study: • <i>Question Bank</i> > Musculoskeletal > Knee > Case Study KNE-0100 • <i>Question Bank</i> > Musculoskeletal > Wrist > Case Study Case Study WR-0100

Fractures	Learn: • <i>Musculoskeletal Core Clinical: Sonographic Anatomy, Case Studies</i> Scan: • Core Musculoskeletal Cases • Core Soft Tissue Cases • Musculoskeletal Challenge Cases • Pediatric Challenge Cases Study: • <i>Question Bank</i> > Musculoskeletal > Head & Neck > Case Study HDNK-0100
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Curriculum Topic	SonoSim Content
Musculoskeletal (Advanced)	
Joints	Learn: • <i>Introduction to MSK: All Lessons</i> • <i>Ankle, Elbow, Foot, Hand & Finger, Hip, Knee, Shoulder, Soft Tissue, & Wrist Anatomy & Physiology: All Lessons</i> • <i>Spine Anatomy & Physiology: Anatomy, Sonographic Technique</i> • <i>Musculoskeletal Core Clinical: All Lessons</i> • <i>Soft Tissue Core Clinical: Sonographic Anatomy, Sonographic Technique</i> • <i>Acromioclavicular Joint Injection & Aspiration, Glenohumeral Joint Injection & Aspiration, Metatarsophalangeal Joint Injection & Aspiration, & Tibiotalar Joint Injection & Aspiration: Sonographic Anatomy & Technique</i> Scan: • Basic MSK Intro Cases • Basic Ankle, Elbow, Foot, Hand & Finger, Hip, Knee, Shoulder, Soft Tissue, Spine, & Wrist Cases • Core Musculoskeletal Cases • Core Soft Tissue Cases • Acromioclavicular Joint Injection & Aspiration, Glenohumeral Joint Injection & Aspiration, Metatarsophalangeal Joint Injection & Aspiration, & Tibiotalar Joint Injection & Aspiration Cases • Musculoskeletal Challenge Cases • Pediatric Challenge Cases Study: • <i>Question Bank</i> > Musculoskeletal > Ankle > Case Study ANK-0100 • <i>Question Bank</i> > Musculoskeletal > Hand & Finger > Case Study HNFG-0100 • <i>Question Bank</i> > Musculoskeletal > Knee > Case Study KNE-0100 • <i>Question Bank</i> > Musculoskeletal > Soft Tissue > Case Study SFT-0400 • <i>Question Bank</i> > Musculoskeletal > Wrist > Case Study WR-0100
Ligaments	Learn: • <i>Introduction to MSK: All Lessons</i> • <i>Ankle, Elbow, Foot, Hand & Finger, Hip, Knee, Shoulder, Soft Tissue, Spine, & Wrist Anatomy & Physiology: All Lessons</i> • <i>Soft Tissue Core Clinical: Sonographic Technique</i> • <i>Tibiotalar Joint Injection & Aspiration: Sonographic Anatomy & Technique</i> Scan: • Basic MSK Intro Cases • Basic Ankle, Elbow, Hand & Finger, Knee, Shoulder, & Wrist Cases • Musculoskeletal Challenge Cases • Acromioclavicular Joint Injection & Aspiration & Glenohumeral joint Injection & Aspiration Cases Study: • <i>Question Bank</i> > Musculoskeletal > Ankle > Case Study ANK-0100

Muscles	Learn: • <i>Introduction to MSK: All Lessons</i> • <i>Ankle, Elbow, Foot, Hand & Finger, Hip, Knee, Shoulder, Soft Tissue, Spine, & Wrist Anatomy & Physiology: All Lessons</i> • <i>Musculoskeletal Core Clinical: All Lessons</i> Scan: • Basic MSK Intro Cases • Basic Ankle, Elbow, Hand & Finger, Hip, Knee, Shoulder, Soft Tissue, & Spine Cases • Core Musculoskeletal Cases • Core Soft Tissue Cases • Acromioclavicular Joint Injection & Aspiration, Biceps Tendon Sheath Injection, Glenohumeral Joint Injection & Aspiration, & Subacromial-Subdeltoid Bursa Injection & Aspiration Cases • Musculoskeletal Challenge Cases
Tendons	Learn: • <i>Introduction to MSK: All Lessons</i> • <i>Ankle, Elbow, Foot, Hand & Finger, Hip, Knee, Shoulder, Soft Tissue, & Wrist Anatomy & Physiology: All Lessons</i> • <i>Musculoskeletal Core Clinical: All Lessons</i> • <i>Soft Tissue Core Clinical: Anatomy, Sonographic Anatomy, Sonographic Technique</i> • <i>Biceps Tendon Sheath Injection: All Lessons</i> Scan: • Basic MSK Intro Cases • Basic Ankle, Elbow, Foot, Hand & Finger, Hip, Knee, Soft Tissue, Shoulder, & Wrist Cases • Core Musculoskeletal Cases • Acromioclavicular Joint Injection & Aspiration, Biceps Tendon Sheath Injection, Metatarsophalangeal Joint Injection & Aspiration, Subacromial-Subdeltoid Bursa Injection & Aspiration & Tibiotalar Joint Injection & Aspiration Cases • Musculoskeletal Challenge Cases • Pediatric Challenge Cases Study: • <i>Question Bank > Musculoskeletal > Hand & Finger > Case Study HNFG-0100</i> • <i>Question Bank > Musculoskeletal > Knee > Case Study KNE-0100</i>
Bursae	Learn: • <i>Introduction to MSK: Anatomy & Physiology</i> • <i>Ankle Anatomy & Physiology: Anatomy, Sonographic Anatomy</i> • <i>Hip, Knee, & Shoulder Anatomy & Physiology: All Lessons</i> • <i>Musculoskeletal Core Clinical: Case Studies</i> • <i>Subacromial-Subdeltoid Bursa Injection & Aspiration: All Lessons</i> Scan: • Basic Knee Cases • Acromioclavicular Joint Injection & Aspiration, Biceps Tendon Sheath Injection, & Subacromial-Subdeltoid Bursa Injection & Aspiration Cases • Musculoskeletal Challenge Cases

Curriculum Topic	SonoSim Content
Pediatrics (Basic)*	
FAST	Learn: • <i>eFAST Core Clinical: Case Studies</i> • <i>FAST Core Clinical: Case Studies</i> Scan: • Core eFAST Cases • Core FAST Cases
Pediatrics (Advanced)*	
Appendix	Scan: • Core Intestinal/Biliary Cases
Intussusception	Learn: • <i>Intestinal/Biliary Core Clinical: Case Studies</i>

Curriculum Topic	SonoSim Content
Head & Neck (Basic)	
Neck masses	Scan: • Core Musculoskeletal Cases • Head & Neck Challenge Cases Study: • <i>Question Bank > New Case Study Coming Soon</i>
Head & Neck (Advanced)	
Sinuses	Study: • <i>Question Bank > New Case Study Coming Soon</i>
Head & Neck (Airway)	
Cartilages	Learn: • <i>Upper Airway Anatomy & Physiology: Sonographic Anatomy, Sonographic Technique</i> • <i>Airway Core Clinical: Sonographic Anatomy, Sonographic Technique</i> Scan: • Basic Thyroid Cases • Basic Upper Airway Cases • Core Airway Cases • Head/Neck Challenge Cases Study: • <i>Question Bank > New Case Study Coming Soon</i>

*Assessment on the Focused Practice Designation (FPD) in Advanced Emergency Medicine Ultrasonography (AEMUS) would include the relevant applications contained within the curriculum. However, specifically for pediatrics, focus on the following topics.

Trachea	Learn: • <i>Upper Airway Anatomy & Physiology</i>: Sonographic Anatomy, Sonographic Technique • <i>Airway Core Clinical</i>: All Lessons Scan: • Basic Thyroid Cases • Basic Upper Airway Cases • Core Airway Cases • Core Soft Tissue Cases • Head/Neck Challenge Cases Study: • <i>Question Bank</i> > New Case Study Coming Soon
Vocal cords	Learn: • <i>Upper Airway Anatomy & Physiology</i>: All Lessons • <i>Airway Core Clinical</i>: Sonographic Anatomy, Sonographic Technique Scan: • Basic Upper Airway Cases • Core Airway Cases Study: • <i>Question Bank</i> > New Case Study Coming Soon

Curriculum Topic	SonoSim Content
Integrated Examinations & Syndromes	
Undifferentiated abdominal pain	Scan: • Core Intestinal/Biliary Cases • Core Renal Cases Study: • <i>Question Bank</i> > New Case Study Coming Soon
Undifferentiated chest pain	Scan: • Core Cardiology Cases • Core Pulmonary Cases Study: • <i>Question Bank</i> > New Case Study Coming Soon
Undifferentiated dyspnea	Scan: • Core Cardiology Cases • Advanced FoCUS Part I Cases Study: • <i>Question Bank</i> > New Case Study Coming Soon
Undifferentiated hypotension	Learn: • <i>RUSH Core Clinical</i>: All Lessons Scan: • Advanced FoCUS Part I Cases Study: • <i>Question Bank</i> > New Case Study Coming Soon

Basic trauma primary survey	
Pericardial fluid	Learn: • <i>eFAST Core Clinical: All Lessons</i> • <i>FAST Core Clinical: Anatomy, Sonographic Anatomy & Technique, Imaging Tips & Pitfalls, Case Studies</i> • <i>RUSH Core Clinical: Sonographic Anatomy, Sonographic Technique, Case Studies</i> Scan: • Core eFAST Cases • Core FAST Cases • Core RUSH Cases Apply: • SonoSim LiveScan® Late Stage Pregnancy & Trauma Care Scenarios
Peritoneal fluid	Learn: • <i>eFAST Core Clinical: Anatomy, Sonographic Anatomy & Technique, Case Studies</i> • <i>FAST Core Clinical: Anatomy, Sonographic Anatomy & Technique, Case Studies</i> • <i>RUSH Core Clinical: Sonographic Anatomy, Sonographic Technique</i> Scan: • Core eFAST Cases • Core FAST Cases • Core RUSH Cases Apply: • SonoSim LiveScan® Critical Care, Early Stage Pregnancy, Late Stage Pregnancy, & Trauma Care Scenarios
Pleural fluid	Learn: • <i>eFAST Core Clinical: Anatomy, Sonographic Anatomy & Technique</i> Scan: • Core eFAST Cases • Core RUSH Cases Apply: • SonoSim LiveScan® Critical Care, Late Stage Pregnancy, & Trauma Care Scenarios
Pneumothorax	Learn: • <i>eFAST Core Clinical: Anatomy, Sonographic Anatomy & Technique, Case Studies</i> • <i>RUSH Core Clinical: Sonographic Anatomy, Sonographic Technique</i> Scan: • Core eFAST Cases • Core RUSH Cases • Advanced Pediatric Lung Sonography Cases Apply: • SonoSim LiveScan® Critical Care & Trauma Care Scenarios

Advanced trauma secondary survey	
Limited solid organ injury	Scan: - Core eFAST Cases - Protocol Challenge Cases Study: <i>Question Bank</i> > Abdomen > Liver > Case Study LVR-0400 <i>Question Bank</i> > Abdomen > Spleen > Case Study SPL-0200 Apply - SonoSim LiveScan® Trauma Care Scenarios
Musculoskeletal	Scan: - Core Musculoskeletal Cases - Musculoskeletal Challenge Cases
Optic nerve sheath diameter	Learn: <i>Ocular Core Clinical</i>: Ocular Trauma, Optic Nerve Diameter & ICP Scan: - Core Ocular Cases Apply: - SonoSim LiveScan® Ocular Scenarios
Soft tissue	Scan: Core Soft Tissue Cases

Not Covered:

Chest & Lung (Advanced): Chronic obstructive pulmonary disease

Male Genitourinary (Advanced): Testicle – Masses/calcifications, Torsion, Trauma

Hepatobiliary (Advanced): Gallbladder and biliary tree –Wall assessment: Emphysematous cholecystitis, Masses

Other Abdomen, Non-Trauma (Advanced): Pneumoperitoneum; Gastric contents/volume; Bowel – Ileus, Colitis/diverticulitis; Pancreas – Masses, Pseudocysts; Spleen – Cysts, Masses

Ocular (Advanced): Extra-ocular muscle assessment, Peri-orbital emphysema, Retro-bulbar hematoma, Periorbital cellulitis/orbital cellulitis

Female Pelvis, Transabdominal and/or Transvaginal Approaches: Obstetrics, second & third trimester assessment (advanced) – Fetal station

Procedures (Basic): Regional anesthesia

Procedures (Advanced): Cardiac pacer wire placement; Guiding and verifying tube and catheter placement – Gastrostomy

Soft Tissue (Advanced): Myositis

Pediatrics (Advanced): Hip assessment

Head & Neck (Advanced): Salivary glands, Thyroid cysts