

## **Checklist for Ultrasound Proficiency**

### **Basic Ultrasound**

1. Can verbalize how diagnostic ultrasound produces images
2. Can verbalize the relationship of frequency/resolution/penetration
3. Can distinguish between various modes of ultrasound (B, M, Color, Doppler)
4. Can verbalize Bioeffects of ultrasound and ways to maximize patient safety
5. Can verbalize relationship between patient/probe/picture

### **Basic Knobology**

1. Can select patient and correct application
2. Can adjust depth and gain appropriately
3. Can use body markers and comments to label images

### **Basic Scanning**

1. Can select appropriate transducer and activate probe
2. Can maneuver probe and image structures in orthogonal planes
3. Demonstrates proficiency in Sweep/Rock and Slide/Rotate/Heel Toe

### **FAST Protocol**

1. Demonstrates ability to image the Hepatorenal space and potential spaces
2. Demonstrates ability to image the Splenorenal space and potential spaces
3. Demonstrates ability to image the subxiphoid view of heart and save a clip
4. Demonstrates ability to image the Posterior cul de sac in orthogonal planes

### **Focused Cardiac Scan**

1. Demonstrates ability to image the heart in a subxiphoid view
2. Demonstrates ability to image the heart in a rescue parasternal view
3. Demonstrates ability to utilize M mode to document a heart rate
4. Demonstrates ability to identify pericardium and area for fluid accumulation

### **Focused Intrauterine Pregnancy Scan**

1. Demonstrates ability to image the uterus from a transabdominal approach
2. Demonstrates ability to use the zoom button to augment the image size
3. Demonstrates ability to utilize M mode to document fetal heart rate
4. Demonstrates ability to save a video clip sweep through the entire uterus

### **Basic Networking**

1. Demonstrates ability to order an Emergency Scan in IBEX/IDX
2. Demonstrates ability to populate a worklist on ultrasound machine/s
3. Demonstrates ability to complete an exam in IDX
4. Verbalizes basic troubleshooting techniques when system is nonfunctional

# **Checklist for Intermediate Ultrasound Proficiency**

## **Introductory Assessment**

1. Mastered and documented completion of Basic Proficiency in Ultrasound
2. Met with Ultrasound Director and Developed portfolio and vocational path
3. Completed all necessary surveys/credentialing

## **Intermediate Ultrasound**

1. Can verbalize forms of attenuation and effect on scanning
2. Can verbalize secondary and tertiary methods to improve image quality
3. Can verbalize sonographic signatures of common anatomy and artifacts

## **Intermediate Knobology**

1. Demonstrates ability to measure and calculate using preset tables
2. Demonstrates ability to improve image quality with focus/frequency/maps
3. Demonstrates ability to utilize Doppler and color flow correctly
4. Demonstrates ability to save video clips and multiple images

## **Intermediate Scanning**

1. Demonstrates ability to scan a variety of patients and troubleshoot
2. Demonstrates ability to utilize range of probes

## **Transvaginal Ultrasound for Intrauterine Pregnancy**

1. Demonstrates appropriate transducer selection and preparation
2. Demonstrates ability to image uterus in sagittal and coronal plane
3. Demonstrates ability to zoom in on suspected pregnancy
4. Demonstrates ability to measure GS, CRL, and Uterus
5. Demonstrates ability to detect free fluid in Posterior cul de sac

## **Ultrasound Guided Procedures**

1. Demonstrates ability to select and prepare transducer
2. Demonstrates ability to differentiate vein from artery
3. Demonstrates ability to cannulate a simulated vessel in Short Axis
4. Demonstrates ability to cannulate a simulated vessel in Long Axis
5. Verbalizes complications and ways to maximize patient safety

## **Intermediate Abdominal Scanning**

1. Demonstrates ability to scan the kidney in orthogonal planes
2. Demonstrates ability to image gallbladder, portal vein, liver, and pancreas
3. Demonstrates ability to image and measure the bile duct along its length

# **Checklist for Advanced Ultrasound Proficiency**

## **Advanced Scanning**

1. Demonstrates ability to scan multiple organs and indications
2. Able to communicate sonographic terminology
3. Able to utilize ultrasound equipment and spectrum of knobs

## **Focused Critical Care Scanning**

1. Demonstrates the sonographic approach to the patient in shock
2. Demonstrates the sonographic approach to the patient with dyspnea
3. Able to measure the IVC/RA junction with M mode and determine a rough guide to central venous pressure
4. Able to utilize ultrasound to demonstrate Endotracheal tube placement
5. Able to image the lung to determine pneumothorax, lung sliding, and lung point
6. Able to determine cardiac function and estimated ejection fraction

## **Focused Vascular Scanning**

1. Able to image and identify Femoral/Popliteal vessels
2. Able to use B Mode compression techniques to rule out clot
3. Demonstrates ability to use color and spectral flow in augmentation
4. Demonstrates ability to produce an arterial and venous waveform

## **Focused Ophthalmologic Scanning**

1. Verbalizes appropriate technique and concerns regarding US of the eye
2. Demonstrates appropriate technique for imaging the anterior and posterior structures within the eye without applying pressure to the orbit
3. Demonstrates ability to measure the ONSD 3mm posterior to the retinal line

## **Focused Peripheral Ultrasound-Guided Nerve Blocks**

1. Demonstrates the ability to distinguish nerves at multiple levels
2. Demonstrates ability to recognize and identify surrounding structures
3. Demonstrates ability to guide needle and place local anesthetic within sheath