



## Overall Learning Objectives

At the end of this session, participants will be better able to:

1. Identify the circumstances under which PoCUS could be used for perioperative patients.
2. Acquire images and identify anatomy for 6 modalities: TTE, Lung, DVT, Abdominal Ultrasound (FAST), Gastric, and Vascular Access.
3. Recognize abnormal findings for each of the modalities.

## Hands-On Station Learning Objectives

### **Gastric 1: Identifying the Gastric Antrum on an Empty Stomach**

At the end of this session, participants will be better able to:

1. Locate and identify normal gastric anatomy.
2. Evaluate the absence of gastric content.

### **Gastric 2: Identifying the Gastric Antrum on a Full Stomach**

At the end of this session, participants will be better able to:

1. Locate and identify normal gastric anatomy.
2. Evaluate the presence of gastric content.

### **TTE: Cardiac Evaluation with Parasternal Windows**

At the end of this session, participants will be better able to:

1. Acquire images and identify anatomy for the parasternal long axis and short axis views.
2. Discuss abnormal findings in hemodynamics instability.

### **Lung/DVT: Evaluate the Presence of Pulmonary Edema and Deep Venous Thrombosis 1**

At the end of this session, participants will be better able to:

1. Identify normal and abnormal patterns of lung ultrasound findings.
2. Discuss the findings associated with pneumothorax.
3. Identify normal, compressible deep lower extremity veins.

### **Abdominal Ultrasound (FAST): Identifying Free-Fluid in the Abdomen**

At the end of this session, participants will be better able to:

1. Acquire images to identify anatomy spaces fluid collects.
2. Identify the presence of free-fluid in the abdomen.

### **TTE: Cardiac Exam Sequence 1**

At the end of this session, participants will be better able to:

1. Demonstrate the ability to move between three windows when evaluating cardiac function.
2. Discuss methods of determining hemodynamic values and cardiac output.

### **TTE: Cardiac Evaluation with Apical Windows**

At the end of this session, participants will be better able to:

1. Acquire images and identify anatomy for the apical 4-chamber, 2-chamber and long axis views.
2. Discuss abnormal findings in significant valvular disease.

### **TTE: Cardiac Evaluation with Subcostal Windows**

At the end of this session, participants will be better able to:

1. Acquire images and identify anatomy for the subcostal 4-chamber and IVC views.
2. Discuss abnormal findings in pericardial tamponade.

### **Vascular Access: Identification of Arterial and Venous Anatomy**

At the end of this session, participants will be better able to:

1. Identify normal vascular anatomy in regions for vascular access.
2. Demonstrate techniques for ultrasound guided vascular access.

### **Lung/DVT: Evaluate the presence of Pulmonary Edema and Deep Venous Thrombosis 2**

At the end of this session, participants will be better able to:

1. Identify normal and abnormal patterns of lung ultrasound findings.
2. Discuss the findings associated with pneumothorax.
3. Identify normal, compressible deep lower extremity veins.

### **TTE: Cardiac Exam Sequence 2**

At the end of this session, participants will be better able to:

1. Demonstrate the ability to move between three windows when evaluating cardiac function.
2. Discuss methods of determining hemodynamic values and cardiac output.

### **Rescue Echo Applications of Point-of-Care Ultrasound**

At the end of this session, participants will be better able to:

1. Tailor the PoCUS exam to a given clinical scenario.
2. Obtain specific PoCUS views dictated by a clinical scenario.
3. Incorporate data obtained from the PoCUS exam into clinical decision making.
4. Determine whether clinical decisions can be made with the data collected in the PoCUS exam.

## **Case-Based Presentation Learning Objectives**

At the end of this session, participants will be better able to:

1. Identify common presentations of various diagnoses that are found with perioperative ultrasound.
2. Demonstrate an approach to recognize abnormal findings and address these findings through clinical management changes.