



## **Ultrasound in the ISTARI Carecube**

### **Purpose**

This document details best practice for adapting the use of ultrasound to the unique environment of the ISTARI Carecube. It is assumed that all providers involved are experienced with the use of ultrasound in a traditional clinical setting. This procedure list is to be used for the general set up and removal of the ultrasound machine with the ISTARI unit. This procedure outline may be used with various ultrasound probes, depending on the imaging procedure (E-FAST, vascular access, cardiac, thoracic etc.).

### **Materials**

- Ultrasound machine with appropriate ultrasound probe
- Power source
- Ultrasound probe gel
- Gloves
- Rubber band

### **Roles/Responsibilities**

- 1 provider is required for general ultrasound procedures.
- 2 providers are not typically required, although can be helpful with patient positioning.

### **Site Adaptation / Quality Metrics**

- Anticipate performing the ultrasound using the left hand instead of right or vice versa, depending on the arm access point used.
- The ultrasound is able to be performed at any of the Lean-in Window Glove Ports, depending on patient positioning.
- Equipment, including the ultrasound machine and procedure set up/equipment, may differ in various settings. It is best to become familiar with the equipment you will be using in your local environment.
- Patient positioning for adequate ultrasound exam must be considered.
- Cleaning the ISTARI Stethoscope Trunk and ultrasound probe from used gel after each use is essential for best images.

## Procedure

### *Inserting the ultrasound probe in the ISTARI Stethoscope Trunk*

1. Ensure the ultrasound machine is properly positioned and plugged in.



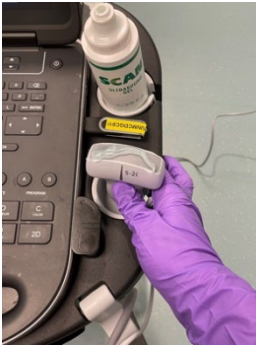
2. Turn on the ultrasound machine and configure settings for appropriate exam and ultrasound probe.



3. Collect appropriate materials such as ultrasound gel, gloves, etc.
4. Prepare the ISTARI Stethoscope Trunk for placement of the ultrasound probe by pulling the attachment inside-out.



5. Place ultrasound gel on the ultrasound probe.



6. Insert the ultrasound probe into the ISTARI Stethoscope Trunk until the end of the ultrasound probe is touching the end of the ISTARI Stethoscope Trunk.



7. Using the ISTARI Lean-in Window Glove Ports, grab the end of the ultrasound probe.



8. Pull the ultrasound probe into the ISTARI unit.



9. Place a rubber band on the end of the ultrasound probe to prevent sliding of the probe or air to enter between the ultrasound probe and plastic.



10. Place ultrasound gel on the tip of the ultrasound probe.



11. Begin/complete your ultrasound assessment/procedure.



### ***Removing ultrasound probe from the ISTARI Stethoscope Trunk***

1. Wipe off excess ultrasound gel on tip of ultrasound probe.
2. Remove the rubber band around the end of the ultrasound probe.



- Carefully slide the ultrasound probe out from the ISTARI Stethoscope Trunk.



- Clean and place the ultrasound probe back with the ultrasound machine.
- Insert hand into the ISTARI Stethoscope Trunk to turn it inside-out. This will allow for cleaning of the gel inside and set the ultrasound attachment up for a new ultrasound procedure.



### ***Performing the E-FAST ultrasound examination***

- Begin with steps 1-10 of “Inserting/using ultrasound probe” protocol using the curved linear probe.



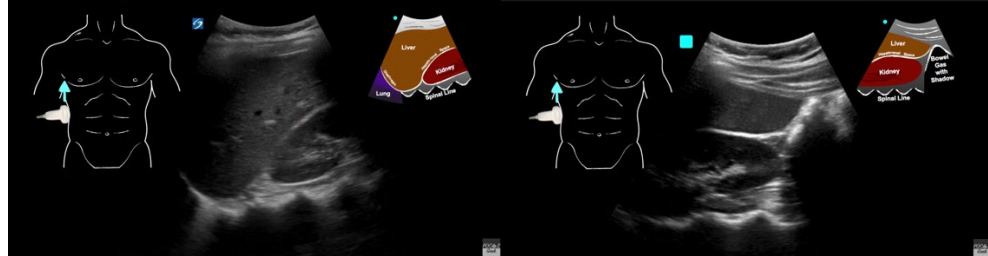
2. Ensure your ultrasound machine is set to the abdominal settings.



3. Maintain patient privacy by adequately covering the patient's chest and abdomen with towels, sheets or blankets. (In this demonstration, the patient may not be completely covered to properly display the technique required to demonstrate.)
4. Begin with the patient's right upper quadrant.



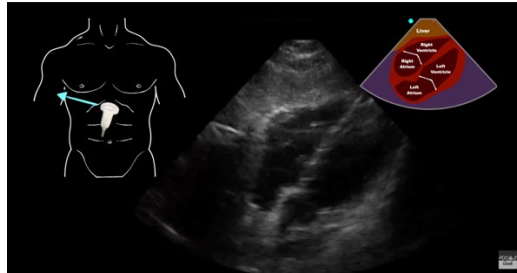
- a. Right upper quadrant views on ultrasound.



5. Move to the subxiphoid view.



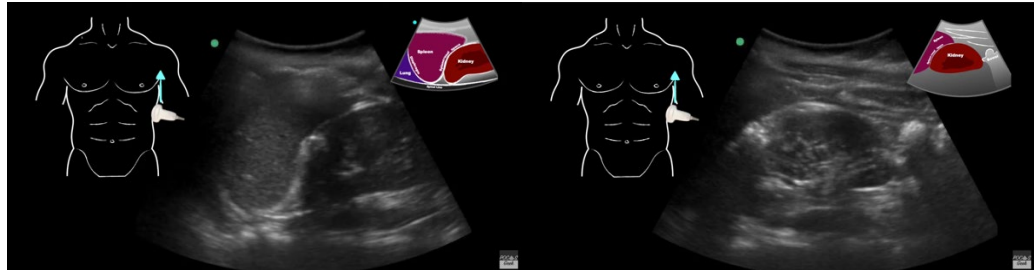
a. Subxiphoid view on ultrasound.



6. Move to the left upper quadrant view.



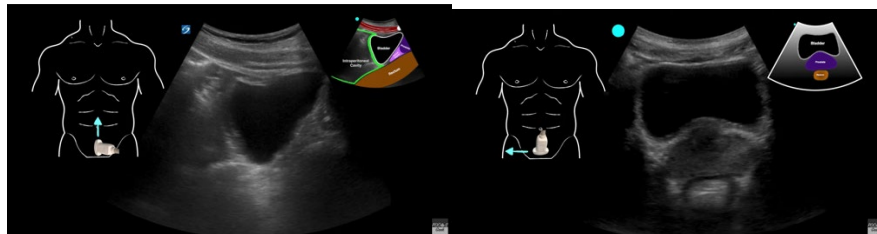
a. Left upper quadrant views on ultrasound.



7. Move to the pelvic view.



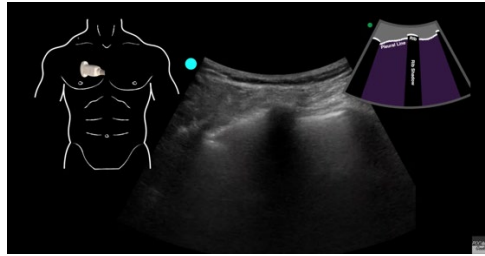
a. Pelvic views on ultrasound.



8. Finally, assess the lungs via the thoracic views.



- a. Thoracic views on ultrasound.



9. Once the E-FAST assessment has been completed, clean the remaining gel off of the patient's skin. Redress/cover patient completely. Remove the ultrasound probe via the "removing ultrasound probe from the ISTARI Stethoscope Trunk" protocol.

### ***Performing the basic cardiac ultrasound examination***

1. Begin with steps 1-10 of "Inserting/using ultrasound probe" protocol using the phased array probe.



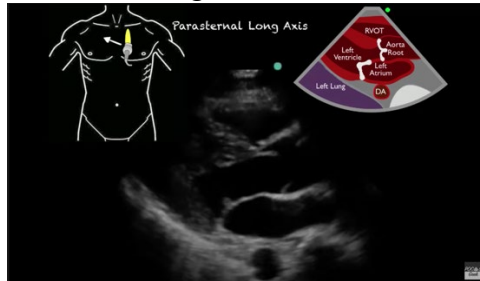
2. Ensure your ultrasound machine is set to the cardiac settings.



3. Maintain patient privacy by adequately covering the patient's chest and abdomen with towels, sheets or blankets. (In this demonstration, the patient may not be completely covered to properly display the technique required to demonstrate.)
4. Begin with the parasternal long axis view.



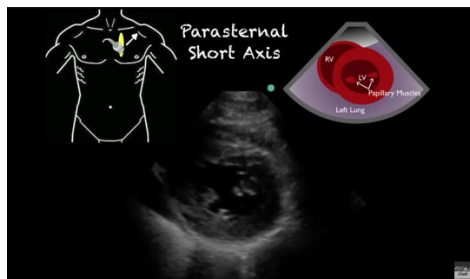
a. Parasternal long axis views on ultrasound.



5. Move to the parasternal short axis view.



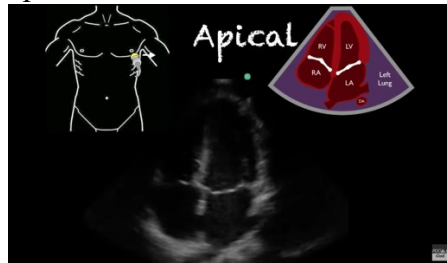
a. Parasternal short axis view on ultrasound.



6. Move to the apical 4 chamber view.



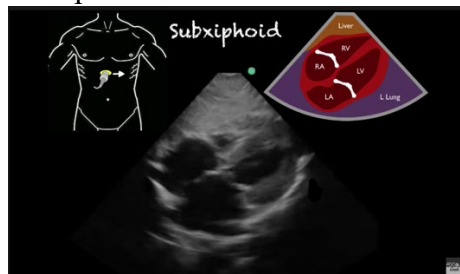
- a. Apical 4 chamber view on ultrasound.



7. Move to the subxiphoid view.

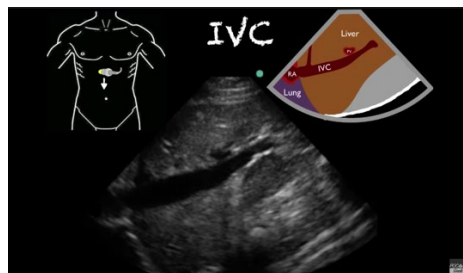


- a. Subxiphoid view on ultrasound.



8. Finally, maneuver the ultrasound probe to assess the inferior vena cava.

- a. Inferior vena cava view on ultrasound.



9. Once the cardiac ultrasound assessment has been completed, clean the remaining gel off of the patient's skin. Redress/cover patient completely. Remove the ultrasound probe via the "Removing ultrasound probe from the ISTARI Stethoscope Trunk" protocol.

## References

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### **Revision History**

- 12/05/2025
- 2/16/2022