

# **ABDOMEN DUPLEX ULTRASOUND TIPS SHUNT**

## Patient Prep (recommended):

1. Patients are recommended to be NPO for 6 hours prior to an abdominal ultrasound examination.
  - a. If a patient has not been NPO (or tube feeding not stopped) for 6 hours, the technologist will scan the patient and document patient preparation.
  - b. Patients who are inadequately prepped may be required to undergo a second limited examination to view the organ that was unable to be imaged.
2. Patient may take water with medications up to exam time (small volumes only).

## Survey:

Perform a real-time survey of the entire TIPS SHUNT, liver, portal veins (main, right and left), main hepatic artery and hepatic veins (right, middle and left). The vessels and TIPS are to be evaluated for the presence, direction and velocity of blood flow. Elevate for ascites.

## Image Documentation:

Each image must be labeled with the patient's full name, medical record number, accession number, initials of the imaging technologist, organ/area identification, scanning plane and patient orientation if different from supine.

If an image of a structure is not well seen, take an image of the structure and annotate the purpose of the image (i.e. proximal TIPS not well seen).

## Guidelines for Abdomen Doppler Ultrasound TIPS SHUNT:

### **TIPS SHUNT**

1. All images of the TIPS SHUNT are obtained in the longitudinal plane.
2. Gray Scale images of:
  - a. Proximal Shunt (Portal Vein End)
  - b. Mid Shunt
  - c. Distal Shunt (Hepatic Vein End)
3. Document COLOR FLOW in the:
  - a. Proximal Shunt (Portal Vein End)
  - b. Mid Shunt
  - c. Distal Shunt (Hepatic Vein End)
4. Document DOPPLER FLOW VELOCITY utilizing angle correct in the:
  - a. Proximal Shunt (Portal Vein End)
  - b. Mid Shunt
  - c. Distal Shunt (Hepatic Vein End)

5. Evaluate the anastomosis at the distal shunt (hepatic vein end).
6. Verify correct direction of flow in vessel along with spontaneity and phasicity.

### **MAIN PORTAL VEIN**

1. All images of the vessels are obtained in the longitudinal plane.
2. Gray Scale Images of:
  - a. Main Portal Vein
  - b. Right Portal Vein
  - c. Left Portal Vein
3. Document COLOR FLOW in the:
  - a. Main Portal Vein
  - b. Right Portal Vein
  - c. Left Portal Vein
4. Document DOPPLER FLOW VELOCITY utilizing angle correct in the:
  - a. Main Portal Vein
  - b. Right Portal Vein
  - c. Left Portal vein
5. Verify correct direction of flow in vessel along with spontaneity and phasicity.
6. Provide anterior/posterior (AP) diameter of Main Portal Vein.

### **HEPATIC VEINS**

1. All images of the vessels are obtained in the longitudinal plane.
2. Gray Scale images of:
  - a. Right Hepatic Vein
  - b. Mid Hepatic Vein
  - c. Left Hepatic Vein
3. Document COLOR FLOW in the:
  - a. Right Hepatic Vein
  - b. Mid Hepatic Vein
  - c. Left Hepatic Vein
4. Document DOPPLER FLOW in the:
  - a. Right Hepatic Vein
  - b. Mid Hepatic Vein
  - c. Left Hepatic Vein
5. Verify spontaneity and phasicity flow in vessel.

Select the level before the hepatic veins drain into the IVC. There may be slight variations but the three hepatic veins should be seen as they come into the IVC.

### **HEPATIC ARTERY**

1. All images of the vessel are obtained in the longitudinal plane.
2. Gray Scale image of Main Hepatic Artery.
3. Document COLOR FLOW in the Main Hepatic Artery.
4. Document DOPPLER FLOW VELOCITY utilizing angle correct in the Main Hepatic Artery.
5. Verify correct direction of flow in vessel.

### **LIVER**

1. Provide gray scale images of liver in longitudinal and transverse planes.
2. The liver needs to be evaluated for size, shape and echotexture.

### **ASCITES**

1. Image the 4 quadrants of the abdomen to assess for fluid (RUQ, RLQ, LUQ and LLQ).

12/2010  
Revised 09/2017