ABDOMEN DUPLEX ULTRASOUND HEPATIC/PORTAL

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 Main Portal Vein, Right Portal Vein, Left Portal Vein, Main Hepatic Artery, Right Hepatic Artery, Left Hepatic Artery, Right Hepatic Vein, Mid Hepatic Vein, Left Hepatic Vein, Splenic Vein, and Inferior Vena Cava (IVC). The vessels 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. hepatic artery not well seen).

Guidelines for Abdomen Doppler Ultrasound Hepatic/Portal:

PORTAL VEINS

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 ARTERY

1. All images of the vessels are obtained in the longitudinal plane.

2. Gray Scale images of:
    a. Main Hepatic Artery
    b. Right Hepatic Artery
    c. Left Hepatic Artery

3. Document COLOR FLOW in the:
    a. Main Hepatic Artery
    b. Right Hepatic Artery
    c. Left Hepatic Artery

4. Document DOPPLER FLOW VELOCITY utilizing angle correct in the:
    a. Main Hepatic Artery.
    b. Right Hepatic Artery
    c. Left Hepatic Artery

5. Verify correct direction of flow in vessel.

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 of flow in vessels.

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.

SPLENIC VEIN

1. All images of the vessel are obtained in the longitudinal plane.

2. Gray Scale image of Splenic Vein.

3. Document COLOR FLOW in the Splenic Vein.

4. Document DOPPLER FLOW in the Splenic Vein.

5. Verify correct direction of flow in vessel along with spontaneity and phasicity.

IVC

1. All images of the vessel are obtained in the longitudinal plane.

2. Gray Scale image of IVC.

3. Document COLOR FLOW in the IVC.

4. Document DOPPLER FLOW in the IVC.

5. Verify spontaneity and phasicity of flow in vessel.

LIVER

1. Provide gray scale images of the liver in longitudinal and transverse plane.

2. The liver needs to be evaluated for size, shape and echotexture.

SPLEEN

1. Provide gray scale images of the Spleen in longitudinal and transverse plane.

2. Provide maximum length measurement of Spleen.

ASCITES CHECK

1. Provide images of the abdomen to assess for fluid.
    a. RUQ
    b. RLQ
    c. LUQ
    d. LLQ

Check for collateral vessels.