

GUNDERSEN HEALTH SYSTEM ULTRASOUND DEPARTMENT POLICY AND PROCEDURE MANUAL

SUBJECT: **TIPS** - Transjugular Intrahepatic Portosystemic Shunt

SECTION: Vascular Ultrasound

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APPROVED BY: _____

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Imaging Protocol: This exam will include the entire liver, a four quadrant evaluation for ascites, and color and spectral Doppler evaluation of the TIPS, the portal veins, and the hepatic vein that the TIPS communicates with. (This protocol suggested by Dr. Kurt Ziegelbein).

Gray Scale Images

1. Transverse liver with hepatic veins: take more than one image if necessary to be sure left and middle hepatic veins are imaged. Typical TIPS involves the right hepatic vein and therefore it will not be visible.
2. Transverse image of the liver with the portal vein
3. Longitudinal liver with images to include:
 - Left lobe of liver with prox. aorta
 - Left lobe of liver with left portal vein
 - Liver with IVC labeled
 - Right lobe of liver with TIPS
 - Right lobe of liver / right kidney interface
4. Cine clip through the liver in both transverse and longitudinal planes
5. Four quadrant assessment for ascites (RUQ, RLQ, LUQ, LLQ)

Color and Spectral Doppler Images (Determine which portal and hepatic vein the TIPS communicates with, typically it is the RPV and RHV)

1. Color and angle-corrected spectral Doppler with PSV measured of the portal vein proximal to its communication with the TIPS
2. TIPS at its communication with the portal vein with color and angle-corrected spectral Doppler and PSV measured
3. Proximal TIPS with color and angle-corrected spectral Doppler and PSV measured
4. Mid TIPS with color and angle-corrected spectral Doppler and PSV measured
5. Distal TIPS with color and angle-corrected spectral Doppler and PSV measured
6. TIPS at its communication with the hepatic vein with color and angle-corrected spectral Doppler and PSV measured
7. Hepatic vein just distal to its communication with the TIPS with color and angle-corrected spectral Doppler
8. Left portal vein should be evaluated for flow direction with color and angle-corrected spectral Doppler with the PSV measured

PT Name: _____ MRN: _____

Indication: _____ Date of TIPS: _____

Previous TIPS revision: no / yes: date: _____

Ordering Provider: _____

DATE	MPV velocity	PV END velocity	MID TIPS velocity	HV END velocity	LPV FLOW DIRECTION (<i>pedal/fugal</i>)	ASCITES (+/-)

Doppler notes:

HV patent: yes / no _____

PV patent: yes / no _____

Grayscale notes:

ABNORMAL:

MPV <30 cm/s

Flow through TIPS <75 or >200 cm/s, >100 cm/s change between exams (consider short term f/u if change 50-100 cm/s)

LPV flow should be fugal