

Indications: FNH versus adenoma after inconclusive standard liver MR, cholangiocarcinoma, biliary anatomy, bile leak, hepaticojejunostomy evaluation, presurgical evaluation of colon metastases to the liver (when ordered as Eovist protocol).

**This protocol must be approved by a body Radiologist.**

After the 20 min images are obtained and if the exam is ordered for biliary anatomy, bile leak or hepaticojejunostomy evaluation, have a **body Radiologist check** images for adequate opacification of the biliary tree.

Can repeat axial and coronal T1s every 5 mins until biliary opacification is adequate.

Full Abdomen FOV: Lung bases to iliac crest or to bottom of liver/spleen/kidneys if they extend low (top/bottom coverage) anterior to posterior subq fat (front/back coverage), right to left subq fat (right/left coverage).

MRCP FOV: above central intrahepatic bile ducts to bottom of gallbladder/pancreas (top/bottom coverage), front of gallbladder to few slices posterior to pancreas (front/back coverage), right of gallbladder to left of pancreatic tail (right/left coverage).

Go to MRIMaster.com for a guide of proper positioning.

Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice	Field of View
T2 HASTE/SSFSE	MRCP THINS COR	cor	no	4	0.8	front	MRCP
T2 HASTE/SSFSE	MRCP THINS SAG	sag	no	4	0.8	right	
T2 HASTE/SSFSE	MRCP THINS AX	ax	no	4	0.8	top	
In/Out Phase w/ DIXON	IN/OUT AX	ax	no	5	1	top	full abdomen
T1 VIBE/LAVA	T1 FS PRE COR	cor	yes	3.5	0.6	front	
T1 VIBE/LAVA	T1 FS PRE AX	ax	yes	3.5	0.6	top	

**CONTRAST** - 1 mL/sec 10 mL Eovist followed by 20 mL saline flush. All patients receive 10 mL Eovist regardless of weight.

For the arterial phase bolus track and trigger when contrast reaches the renal arteries.

T1 VIBE/LAVA	T1 FS ART AX	ax	yes	3.5	0.6	top	full abdomen
T1 VIBE/LAVA	T1 FS 70 SEC AX	ax	yes	3.5	0.6	top	
T1 VIBE/LAVA	T1 FS 3 MIN COR	cor	yes	3.5	0.6	front	
T1 VIBE/LAVA	T1 FS 5 MIN AX	ax	yes	3.5	0.6	top	
T2 HASTE/SSFSE	T2 COR	cor	no	7	1.4	front	
T2 HASTE/SSFSE	T2 AX	ax	no	7	1.4	top	
T2 HASTE/SSFSE	T2 FS AX	ax	yes	7	1.4	top	
T1 VIBE/LAVA	T1 FS 10 MIN AX	ax	yes	3.5	0.6	top	
T1 VIBE/LAVA	T1 FS 10 MIN COR	cor	yes	3.5	0.6	front	
Diffusion (b50, b800, ADC)	DIFFUSION AX	ax	yes	7	1.4	top	
T1 VIBE/LAVA	T1 FS 15 MIN AX	ax	yes	3.5	0.6	top	
T1 VIBE/LAVA	T1 FS 15 MIN COR	cor	yes	3.5	0.6	front	
T1 VIBE/LAVA	T1 FS 20 MIN AX	ax	yes	3.5	0.6	top	
T1 VIBE/LAVA	T1 FS 20 MIN COR	cor	yes	3.5	0.6	front	

**RECONS:**

axial and coronal subtractions