

Radiology of Indiana

Protocols	Scan #	FOV (CM)	Slice Thickness (mm)	Spacing (mm)	Special Instructions/Comments
Abdomen					Any abdomen study without an organ specific indication. Otherwise, see organ specific protocol.
Ax Fiesta/ True FISP		~30-40	5	1	
Ax 3D Dual Echo		~30-40	5	2.5	
Ax T2 SSFSE/HASTE		~30-40	5	1	
Cor T2 SSFSE/HASTE		~30-40	4	1	
Ax T2 FS Propeller/T2 Haste FS		~30-40	5	1	
Ax DWI (50/1000)		~30-40	8	2	Only send B50 and 1000
ADC		~30-40	8	2	
Ax Pre (Lava or sim)		~30-40	5	2.5	
Ax Post Dyn (20 sec, 1 min 3 min)		~30-40	5	2.5	If there is a "mask" phase you don't need to complete pre-contrast LAVA. If not, we need a separate pre-contrast LAVA.
Cor Post 5 min		~30-40	4	2	
Ax Post 10 min		~30-40	5	2.5	
Ax T1 Lava 20 min (Eovist only)		~30-40	5	2.5	FYI: All Vibes/Lavas should be Fat Sat or "water only" images for all MRI body protocols
Adrenal					
Ax Fiesta/ True FISP		~30-40	5	1	
Ax 3D Dual Echo		~30-40	5	2.5	
Coronal 3D Dual Echo		~30-40	5	2.5	
Ax T2 SSFSE/HASTE		~30-41	5	1	
Cor T2 SSFSE/HASTE		~30-40	4	1	
Ax T2 FS Propeller/T2 Haste FS		~30-40	5	1	
Ax DWI (50/1000)		~30-40	8	2	Only send B50 and 1000
ADC		~30-40	8	2	
Ax Lava or similar		~30-40	5	2.5	
Liver					
Ax Fiesta/ True FISP		~30-40	5	1	Please refer to Liver & Abdominal MRI Clinical Guidelines for Gadolinium Based Contrast Agents
Ax 3D Dual Echo		~30-40	5	2.5	For dedicated liver indication, axial coverage can be from lung bases to below liver. Does not need to cover below kidneys
Ax T2 SSFSE/HASTE		~30-41	5	1	
Cor T2 SSFSE/HASTE		~30-40	4	1	
Ax T2 FS Propeller/T2 Haste FS		~30-40	5	1	
Ax DWI (50/1000)		~30-40	8	2	Only send B50 and 1000
ADC		~30-40	8	2	
Ax Pre (Lava or sim)		~30-40	5	2.5	
Ax Post Dyn (20 sec, 1 min 3 min)		~30-40	5	2.5	
Cor Post 5 min		~30-40	4	2	
Ax Post 10 min		~30-40	5	2.5	
Ax T1 Lava 20 min (Eovist only)		~30-40	5	2.5	
Pancreas with MRCP					
Ax Fiesta/ True FISP		~30-40	3	1	* Use Gadavist and have Body Radiologist review last set of images to determine if delayed images need to take place, if no bile leak identified.
Ax 3D Dual Echo		~30-40	4	2	Pancreatic protocol must include MRCP in order
Ax T2 SSFSE/HASTE		~30-41	5	1	F/U IPMN, pancreatic cyst, chronic pancreatitis, pancreatic mass.
Cor T2 SSFSE/HASTE		~30-40	4	1	For dedicated pancreas indication, axial coverage can be from bottom of heart/left hemidiaphragm to below C-loop of duodenum. Plan from coronal localizer. Coronal images must cover pancreas from front to back using axial images for planning. Do not need to cover skin to skin on coronal. Smallest FOV as possible.
Ax T2 FS Propeller/T2 Haste FS		~30-40	4	1	
Ax DWI (50/1000)		~30-40	7	1	Only send B50 and 1000
2D MRCP		~30-40	40	0	3 Oblique views. See planning images
Cor 3D MRCP		~30-40	1.4	0.7	Focus on pancreatic duct
3D MIP		~30-40			Single thick slab from 3D images
ADC		~30-40	7	1	
Ax Pre (Lava or sim)		~30-40	3	1	
Ax Post Dynamic (45 sec, 80 sec, 3 min)		~30-40	4	1.5	
Cor Post 5 min		~30-40	4	2	
Ax Post 10 min		~30-40	3	1	
Renal					
Ax Fiesta/ True FISP		~30-40	4	1	For dedicated renal indication (usually renal mass), axials must cover from above adrenal glands to below kidneys. Plan from localizer. Does not need to cover entire abdomen. Coronal images must cover both kidneys from front to back using axial images for planning. Do not need to cover skin to skin.
Ax 3D Dual Echo		~30-40	6	1.5	
Ax T2 SSFSE/HASTE		~30-41	5	1	
Cor T2 SSFSE/HASTE		~30-40	4	1	
Ax T2 FS Propeller/T2 Haste FS		~30-40	4	1	
Ax DWI (50/1000)		~30-40	7	1	Only send B50 and 1000
ADC		~30-40	7	1	
Ax Pre (Lava or sim)		~30-40	3	1	
Cor Pre (Lava or sim)		~30-40	3	1	
Ax Post Dyn (20 sec, 60 sec, 90 sec)		~30-40	3	1	
Cor Post 3 min		~30-40	3	1	
Ax Post (acquired after Cor Post 3 min)		~30-40	3	1	
Post process subtraction					Cor post minus pre; Ax post minus pre
Liver with MRCP					
Ax Fiesta/True FISP		~30-40	5	1	* Use Eovist and have Body Radiologist review last set of images to determine if delayed images need to take place, if no bile leak identified.
Ax 3D Dual Echo		~30-40	5	2.5	Any MRCP study without a pancreas specific indication (otherwise use Pancreas with MRCP protocol). Must cover entire liver axial and coronal. Does not need to include entire kidney on axial unless needed to cover liver. Does not need skin to skin coverage on coronal.
Ax T2 SSFSE/HASTE		~30-40	5	1	
Cor T2 SSFSE/HASTE		~30-40	4	1	
Ax T2 FS Propeller/T2 Haste FS		~30-40	5	1	
Ax DWI (50/1000)		~30-40	8	2	Only send B50 and 1000
ADC		~30-40	7	1	
2D MRCP		~30-40	40	0	3 Oblique views.
Cor 3D MRCP		~30-40	1.4	0.7	
3D MIP		~30-40			Single thick slab from 3D images
Ax Pre (Lava or sim)		~30-40	5	2.5	
Ax Post Dyn (20 sec, 1 min 3 min)		~30-40	5	2.5	
Cor Post 5 min		~30-40	4	2	

	Coronal STIR	25-35°	4	1	
	Coronal GRE	25-35°	4	1	
	Breath Hold (~20 seconds each)				
	COR T1 VIBE (non Fat Sat)	25-35°	4	1	
	Sag T1 VIBE (non Fat Sat)	25-35°	4	1	
	Ax T2 HASTE (non Fat Sat)	25-35°	4	1	If poor Fat Sat on the HASTE, please use triplane breath-hold STIR
	Triplane T2 HASTE Fat Sat	25-35°	4	1	
	Soft Tissue "Tumor"				*FOV and Spacing subject to area of concern. Use same FOV and Spacing as the closest joint or body part.
	Axial T1	*	*	*	
	Axial PD Fat Sat	*	*	*	
	Axial GRE	*	*	*	
	Ax T1 Fat Sat	*	*	*	
	Cor T2	*	*	*	
	Cor STIR	*	*	*	
	Sag T2 Fat Sat	*	*	*	
	Cor InOut Phase	*	*	*	
	Triplane T1 Fat Sat Post	*	*	*	
	Pectoralis				
	Axial T2 Fat Sat	35	4	1	Large field of view oriented to pectoralis major muscle (to include from lateral cortex of humerus thru sternum)
	Cor T1	32	4	1	Large field of view oriented to pectoralis major muscle (to include from lateral cortex of humerus thru sternum)
	Cor STIR	32	4	1	Large field of view oriented to pectoralis major muscle (to include from lateral cortex of humerus thru sternum)
	Sag T1	32	4	1	Large field of view oriented to pectoralis major muscle (to include from lateral cortex of humerus thru sternum)
	Axial T2	20	4	1	Small field of view oriented to the humerus (truly axial to humerus, from glenohumeral joint to about mid humerus)
	Axial PD Fat Sat	20	4	1	Small field of view oriented to the humerus (truly axial to humerus, from glenohumeral joint to about mid humerus)
	Axial GRE	20	4	1	Small field of view oriented to the humerus (truly axial to humerus, from glenohumeral joint to about mid humerus)
	Urogram				
	Saline Bolus 100 ml				
	Cor SSFSE	~30-40	6 mm	7 mm	
	Axial SSFSE	~30-40	6 mm	7 mm	
	Axial DE	~30-40	5 mm	2.5 mm	
	Axial LAVA	~30-40	3 mm	1.5 mm	
	Axial T2	~30-40	6 mm	7 mm	
	Axial DWI	~30-40	8 mm	10 mm	
	Give Lasix 10 mg	~30-40			
	2D Cor Oblique (MRCIP)	~30-40	60 mm	60 mm	
	3D Cor Oblique (MRCIP)	~30-40	2 mm	2 mm	
	Cor LAVA - Dynamic 5 min. & 10 min.	~30-40	3 mm	1.5 mm	
	Axial LAVA 12 minute	~30-40	3 mm	1.5 mm	
	Cor Fiesta	~30-40	6 mm	7 mm	
	Axial Fiesta	~30-40	6 mm	7 mm	
	Cor LAVA - 15 min.	~30-40	6 mm	7mm	
	Inguinal Hernia				
	COR T1	36	5 mm	1 mm	
	COR STIR	36	5 mm	1 mm	
	AX T1	36	5 mm	1 mm	
	AX STIR	36	5 mm	1 mm	
	SAG T2 Fat Sat	36	5 mm	1 mm	
	AX SSFSE without Valsalva	36	5 mm	1 mm	
	AX SSFSE with Valsalva	36	5 mm	1 mm	
	AX SSFSE Fat Sat without Valsalva	36	5 mm	1 mm	
	AX SSFSE Fat Sat with Valsalva	36	5 mm	1 mm	
	COR SSFSE without Valsalva	36	5 mm	1 mm	
	COR SSFSE with Valsalva	36	5 mm	1 mm	
	AX T1 Fat Sat Pre	36	5 mm	1 mm	Only if referring physiciain ordered with contrast
	AX T1 Fat Sat + C	36	5 mm	1 mm	Only if referring physiciain ordered with contrast
	COR T1 Fat Sat + C	36	5 mm	1 mm	Only if referring physiciain ordered with contrast