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MR Protocols

Exam: Prostate
 Coil: ATD TORSO 4 Channel
 Position: Supine – Feet First
 Landmark: Position to coil

Pulse Sequence	Options	TR	TE TI	ETL	FA	BW	FOV	Thick/ Gap	Sat	Matrix	NEX	Freq Dir	Time	Instructions
3 PL LOC	None						40	5/8		<u>256</u> 128	1		:29	Slice :9 Auto Center Freq H2O
SAG T1 LOC	None	550	Min Full			20.83	26	5/0		<u>256</u> 128	1	S/I	1:18	PFOV 1 Auto Center Freq H2O Slice 20
AX T1 WHOLE PELVIS	Zip 512	625	Min Full			20.83	40	8/2		<u>256</u> 192	1	R/L	2:07	PFOV 1 Auto Center Freq H2O Slice 23
COR T1 SE	NPW	450	Min Full			15.63	14	3/0		<u>256</u> 192	1	S/I	1:41	Auto Center Freq H2O AS Slice 18
COR T2 FRFSE	NPW TRF FAST FR	1500	85	17		20.83	14	3/0		<u>256</u> 128	2	S/I	2:34	Auto Center Freq H2O AS Slice 18
AX T2 FR FSE	NPW TRF FAST FR	1500	85	17		20.83	14	3/0		<u>256</u> 192	2	S/I	1:58	Auto Center Freq H2O AS Slice 21
AX T1 SE	NPW	500	Min Full			15.63	14	3/0		<u>256</u> 192	1	S/I	1:52	Auto Center Freq H2O AS Slice 21

Formatting

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Comments:

Empty Bladder/Rectum before study.

- Radiologist inserts Endo Prostate Coil—in Llat Decube position—inflate to 60cc
- Exam Gloves—KY lubricant—4X4
- Disposable Endo Rectal Coil

flat side of coil against prostate

MR Protocols

Exam: Liver

Coil: 12channel Body Full FOV

Position: Supine

Landmark: Zyphoid to crest region

Pulse Sequence	Options	TR	TE TI	ETL	FA	BW	FOV	Thick / Gap	Sat	Mat rix	NE X	Freq Dir	Time	Instructions
3PL LOC	NPW						40	10/0		<u>256</u> 128	2		:31	ACF=H20 5-7 SL
CALABRATION SCAN							48					A/P	:12	47 SLICES
COR FIESTA F/S	SEQ ASSET FAST		MIN FULL		75	83.33	40	7/1		<u>224</u> 320	1	S/I	:24	PFOV:1 SHIM:AUTO
SSFSE COR T2	SS FAST	3000	MIN			62.50	40	7/1		<u>352</u> / 224	1	S/I	:60	ACF=H20 25 SL BH
AX FIESTA F/S	SEQ ASSET FAST		MIN FULL		75	83.33	40	7/1		<u>224</u> 320	1	S/I	:24	PFOV:1 SHIM:AUTO
AX T2 F/S	FC TRF FAST	5500	140	21		31.25	40	7/1	F/S	<u>256</u> 192	1	R/L	:50	ACF=H20 FCD=SL PFOV.75 25-30 SL
OPTIONAL AX FSPGR IN/OUT	FAST Zip 512	200			60		40	7/1		<u>256</u> 192	1	R/L	:30	ACF=H20 PFOV=.75 BH
AX FSPGR/30 F/S	FAST	34	MIN FULL		30	31.25	40	7/1	F/S	<u>256</u> 256	.75	R/L	1:42	ACF=H20 PFOV=1 BH
PRE LAVA	VBW FAST ZIP 2	Prep Time Auto	MIN		45	31.25	40	4.0	F/S		1	Un- swap	:30	ACF=H20 FTOF SPGR

POST														
POST LAVA 3D AX	VBW FAST ZIP2	Flouor trigger	Min		45	31.25	40	4.0	F/S	<u>256</u> 128	1	Un- swap	1:42	ACF=H2O FTOF SPGR
Repeat LAVA at 30sec, 90sec, 3 minutes														
POST 3D COR LAVA	VBW FAST ZIP2		Min		45	31.25	40	4.0	F/S	256 128	1			
+C AX FSPGR F/S	FAST	34	Min full		30	31.25	40	8/2	F/S	<u>256</u> 256	.75	R/L	1:42	ACF=H20 PFOV=1 BH
+C COR FSPGR F/S	FAST	34	Min full		30	31.25	40	8/2	F/S	<u>256</u> 256	.75	S/I	1:42	ACF=H20 PFOV=1 BH

RESPIRATORY GATING: -----DEFAULT DATA—USING BELLOWS-SELECT UNDER SCANMODE:
RESPIRATORY GATING

USED TO ACQUIRE PD OR T2W IMAGES (AX-COR-SAG)
(FSE, FSE-XL, FRFSE-XL, FSE-IR, SSFSE) IN 2D MODE
(FAST TOF GRE/SPGR, FAST GRE/SPGR, FIESTA, FRFSE-XL)
(IN 3D MODE)

THE EFFECTIVE TR DETERMINES THE CONTRAST,# SLICES, AND SCAN TIME.

RESPIRATORY INTERVAL: 2X
TRIGGER PT: 20%
TRIGGER WINDOW: 20%
INTER-SEQUENCE DELAY: MINIMUM
RESPIRATORY RATE: UPDATE—AT ANYTIME

ALL OTHER SCAN PARAMETERS MAYBE SELECTED ACCORDINGLY SPATIAL RESOLUTION
CONTRAST
SNR

MR Protocols

(TO BE MONITORED BY RADIOLOGIST)

Exam: LIVER (WITH EOVI(BAYER) CONTRAST

Coil: TORSO FULL FOV 8CH.

Position: SUPINE-FEET FIRST

Landmark: XIPHOID REGION

Pulse Sequence	Options	TR	TE TI	ETL	FA	BW	FOV	Thick/ Gap	Sat	Matrix	NEX	Freq Dir	Time	Instructions
3 PLANE LOC		MIN	140			83.33	48	10/0		<u>384</u> 128			:33	PFOV:1 AUTOSHIM 11 SLICES
CALIB SCAN	FAST CALIB						48	15/0				A/P	:12	AUTOSHIM 25SLICES
COR FIESTA	SEQ ASSET FAST		<u>MIN</u> FULL		75	83.33	40	8/1	FS	<u>224</u> 320	1	S/I	:24	PFOV:1 SHIM:AUTO
COR 2D	FAST, SS	3000	MIN				42	10/1		<u>256</u> 128		S/I	:42	PFOV:1 AUTOSHIM CV2;240 15 SLICES
AXIAL FIESTA	SEQ ASSET FAST		<u>MIN</u> FULL		75	83.33	40	8/1	FS	<u>224</u> 320	1	S/I	:24	PFOV:1 SHIM:AUTO
AXIAL IN PHASE	FAST ASSET ZIP 512	200	IN PHASE		5	31.25	40	8/1		<u>256</u> 224	1	R/L	:42	PFOV:1 AUTOSHIM 26 SLICES
AXIAL OUT OF	FAST ASSET	200	OUT PHASE		60	31.25	40	8/1		<u>256</u> 224	1	R/L	:42	PFOV:1 AUTOSHIM 26 SLICES

PHASE	ZIP 512													
AXIAL SPGR FS	FAST, ASSET ZIP2				12	125	38	4/0	FS SPEC	<u>320</u> 192		R/L	:18	PFOV:1 AUTOSHIM 64 LOCS
AXIAL SPGR FS POST	FAST,ZIP2 ASSET MPH SMTPREP				12	125	38	4/0	FS SPEC	<u>320</u> 192		R/L	:29	PFOV:1 AUTOSHIM 64 LOCS 10ML EOVI OR .5 MAG DOSE
AXIAL T2 FS POST	FC,TRF FAST, FR ASSET	3250	102	21		62.50	40	5/1	FS	<u>384</u> 224	1	R/L	:26	PFOV:1 AUTOSHIM 15 SLICES
AXIAL SPGR FS POST	FAST		MIN		12	62.50	40	4/0	FS	<u>256</u> 128	1	R/L	:39	PFOV:1 AUTOSHIM 64 LOCS
COR SPGR FS POST	FAST	34	<u>MIN</u> FULL		30	31.25	40	6/1	FS	<u>256</u> 256	.75	UNSWAP	:27	PFOV:1 AUTOSHIM 64 LOCS

EOVIST(BAYER)=10ML/VIALS –BOX OF 5
(\$130) (\$650)

DOSE IS EQUAL TO .5 OF MAGNEVIST USED ON EACH INDIVIDUAL PT.
EACH VIAL IS USED ONLY ONCE; DO NOT EXCEED 10ML PER PT.

MR Protocols

Exam: MRCP

Coil: Torso body 8 channel Full FOV

Position: Center to coil landmark

Landmark:

Pulse Sequence	Options	TR	TE TI	ETL	FA	BW	FOV	Thick/Gap	Sat	Matrix	NEX	Freq Dir	Time	Instructions
3 Plane LOC	NPW						40	10/0		<u>256</u> 128	2	Water	:31	Auto shim 5 Slices
CALIBRATION SCAN							48					A/P	:12	47 Slices
COR FIESTA	SEQ ASSET FAST		MIN FULL		75	83.33	40	8/1		<u>224</u> 320	1	S/I	:24	PFOV:1 SHIM:AUTO
SS FSE COR	FAST SS	4000	MIN			62.50	42	8/2		<u>256</u> 128	1	S/I	1:09	Auto Center H20 24 Slices
AX FIESTA	SEQ ASSET FAST		MIN FULL		75	83.33	40	8/1		<u>224</u> 320	1	S/I	:24	PFOV:1 SHIM:AUTO
AX HRT2	FC TRF FR FAST	2500	140	17		31.25	40	6/1		<u>256</u> 192	1	A/P	:53	Breath hold 24 slices PFOV .75
BH (IN /OUT) FSPGR	FAST ZIP 512	175			80		40	6/1		<u>256</u> 224	1	A/P	:30	Breath hold 24 slices PFOV .75
RADIAL HEAD PANCREAS	FAST SS	MIN	489			31.25	34	40/0		<u>384</u> 256		Un-swap		LOC 15/5 #LOC/Pause = 1 CV2= 264
RADIAL PANCREAS TAIL	FAST SS	MIN	489			31.25	34	40/0		<u>384</u> 256		Un-swap		LOC 15/5 #LOC/Pause = 1 CV2= 264
RADIAL PORTAL VEIN	FAST SS	MIN	489			31.25	34	40/0		<u>384</u> 256		Un-swap		LOC 15/5 #LOC/Pause = 1 CV2= 264
COR thin slab 15 Slices	FAST SS	MIN	250			31.25	36	4/0		<u>256</u> 192		Un-swap		15 Slices #LOC/Pause = 1

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FILMING UPON REQUEST - ALL IMAGES ON PACS SYSTEM

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Comments:

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OPTIONS														
AX FSE – IR	FC SEQ VBW FAST	5000	<u>50</u> 150	8		20.83	24	5/1	I/S	<u>256</u> 192	3	A/P	6:05	PFOV=1 Auto Freq H20 FCD = slice 20 SL
AX FSE T2	NPW FC FAST	5000	102	12		15.63	24	5/1	I/S	<u>256</u> 256	3	A/P	5:35	Autoshim – Auto Freq H20 20 SL
OBI FSE T2	NPW FC FAST ZIP 512	4950	102	16		15.63	16	4/0	I/S	<u>256</u> 224	4	Un- swap	4:38	Parallel to uterus
PACS SYSTEM BURN CD IF NEEDED														

MR Protocols

Exam: Cardiac
 Coil: Torso PA (4 channel)
 Position: Supine – Feet First
 Landmark: Center over heart

Pulse Sequence	Options	TR	TE TI	ETL	FA	BW	FOV	Thick / Gap	Sat	Matrix	NEX	Freq Dir	Time	Instructions
3-PL LOC CARDIAC	NPW						40	8/0		<u>256</u> 128	2		:55	Auto center H2O 9 slice
SAG LOC FSPGR CARDIAC	FC GAT FAST		Min Full		15	31.25	40	8/0		<u>224</u> 224	1	S/I	:23	Auto center H2O 20 slice
SAG LOC FIESTA CARDIAC	SEQ FAST		Min Full		45	125	40	8/0		<u>224</u> 224	1	S/I	:13	Auto center H2O 20 slice
LOC FCARD SPGR CARDIAC	SEQ FAST GAT		Min Full		10	31.25	40	8/0		<u>256</u> 128	1	Un- swap	:14	Auto center H2O 20 cardiac phases / 400 images
FCARD SPGR CARDIAC	FC SEQ FAST VBW GAT		Min Full		15	125	40	8/0		<u>256</u> 160	.75	Un- swap	:16	Auto center H2O 20 slices
OBL SHORT AXIS FIESTA CARDIAC	GAT SEQ FAST		Min Full		45	125	40	8/0		<u>224</u> 224	1	Un- swap	:15	Auto center H2O 20 slices
Double IR T1 OBL SHORT AXIS CARDIAC	GAT SEQ VBW FAST		42	32		62.50	40	8/0		<u>256</u> 256	1	Un- swap	:16	Auto center H2O 20 slices
	BSP		BSP=auto T1 =auto											
TRIPLE IR F/S OBL SHORT AXIS CARDIAC	GAT SEQ VBW FAST		42	32		62.50	40	8/0		<u>256</u> 256	1	Un- swap	:16	Auto center H2O 20 slices
	BSP		BSP=auto T1 T1=150											

															(PFOV for all .75)
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PACS SYSTEM – BURN CD IF NEEDED

Place non –metallic leads

- 1) 1 inch off sternum inline with axillary plane
- 2) OFF axillary plane
- 3) Down from axillary plane diagonal to lead #1 across heart
- 4) Across from lead #3 below lead #1 (between ribs intercostals region)

MR Protocols

Exam: APPENDIX-PREGNANT PATIENT
 Coil: 8CH. TORSO FULL FOV BODY LOWER
 Position: SUPINE
 Landmark: 2" ABOVE CREST

Pulse Sequence	Options	TR	TE TI	ETL	FA	BdW	FOV	Thick/ Gap	Sat	Matrix	NEX	Freq Dir	Time	Instructions
3 PLANE LOC	SEQ,FAST SS	MIN	80			62.50	40	8/0		<u>320</u> 192	1	UNSWAP	:26	9 SLICES
AXIAL T1	SEQ,FAST Irp	774	INPHASE		55	31.25	40	8/1		<u>256</u> 192	1	R/L	:31	PFOV=1 SHIM;AUTO 20 SLICES
AXIAL FIESTA	SEQ, FAST		<u>MIN</u> FULL		75	83.33	40	8/0		<u>224</u> 320	1	R/L	:26	PFOV=1 SHIM;AUTO 20 SLICES
AXIAL T2 FS	SEQ,FAST		<u>MIN</u> FULL		70	83.33	40	7/0	F/S	<u>224</u> 320	1	R/L	:24	PFOV=1 SHIM;AUTO 20 SLICES
AXIAL T2	FAST, SS	MIN	180			83.33	40	7/0		<u>384</u> 224	1	R/L	:28	PFOV=1 SHIM:AUTO 20 SLICES
COR FIESTA	SEQ,FAST	<u>MIN</u> FULL			75	83.33	40	7/0		<u>224</u> 320	1	S/I	:27	PFOV=1 SHIM:AUTO 20 SLICES
COR T2 FS	SEQ,FAST	<u>MIN</u> FULL			70	83.33	40	7/0	F/S	<u>224</u> 320	1	S/I	:24	PFOV=.80 SHIM:AUTO 20 SLICES

COR T2	FAST,SS	MIN	180			83.33	40	7/0		<u>224</u> 320	1	S/I	;28	PFOV=.80 SHIM:AUTO 20 SLICES
SAG T2	FAST,SS	MIN	180			83.33	40	7/0		<u>384</u> 224	1	S/I	;28	PFOV=.80 SHIM:AUTO 20 SLICES
SAG T2 FS	FAST,SS	MIN	180			83.33	40	7/0	F/S	<u>384</u> 224	1	S/I	;28	PFOV=.80 SHIM:AUTO 20 SLICES

MR Protocols

Exam: RUNOFF

Coil: BODY

Position: SUPINE/FEET FIRST

Landmark: XIPHOID

Pulse Sequence	Options	TR	TE TI	E T L	FA	BW	FOV	Thick/ Gap	Sat	Matrix	NEX	Freq Dir	Time	Instructions
3 Plane LOC TOP	Body Coil						44	10		<u>256</u> 128	1		:12	PFOV 1, SHIM OFF, 5 SLICES/PLANE
3 Plane Loc MID	Body Coil						44	10		<u>256</u> 128	1		:12	PFOV 1, SHIM OFF, 5 SLICES/PLANE
3 Plane LOC BOT	Body Coil						44	10		<u>256</u> 128	1		:12	PFOV 1, SHIM OFF, 5 SLICES/PLANE
Fast TOF LOC BOT PSEQ: VASC TOF SPGR	SEQ, FAST, Body Coil Axial	MIN	MIN		60	31.25	48	5/0		<u>256</u> 128	1	R/L	:45	PFOV .75, SHIM AUTO USER CV SAT GAP 10 MM VASC SCN PROJ IMG 19 COLLAPSE ON 89 SLICES
LT TRICKS	FAST, ZIP2, TRICKS, COIL HD LOWER LEG (L), 3D		MIN		45	31.25	48	3/28 LOC		<u>512</u> 224	1	UNSWAP PFOV:1 (14) PHASES	2:17	PFOV .60, SHIM AUTO, 5 CC SCAN IN CORONAL PLAN
RT TRICKS	FAST, ZIP2, TRICKS, COIL HD LOWER LEG (R), 3D		MIN		45	31.25	48	3/28 LOC		<u>512</u> 224	1	UNSWAP PFOV:1 (14) PHASES	2:17	PFOV .60, SHIM AUTO, 5 CC SCAN IN CORONAL PLAN
FAST TOF LOC TOP	SEQ, FAST BODY COIL AXIAL, 2D	MIN	MIN		60	31.25	44	5/0		<u>256</u> 128	1	R/L	:45	USER CV SAT GAP 10 MM VASC SCN PROJ IMG 19 COLLAPSE ON 89 SLICES
FAST TOF LOC MID	SEQ, FAST BODY COIL	MIN	MIN		60	31.25	44	5/0		<u>256</u> 128	1	R/L	:45	USER CV SAT GAP 10 MM VASC SCN PROJ IMG 19

	AXIAL, 2D													COLLAPSE ON 89 SLICES
3D TOP	M STATION, FAST,ZIP4, FLUORO, VASC TOF SPGR, 3D, BODY COIL		MIN		30	83.33	46	3.6/36 LOC/ SLAB		<u>320</u> 192	.75	UNSWAP	:17	PFOV .80 SHIM AUTO, USER CV, IM ACQ:5, TURBO MODE: 2, REV ELLIP:0, ELLI CENTRIC:0, CENTRIC:1, REV CENTRIC:0, MASK ACQ:1, VENUS ACQ:1, CV19:0, CV21 SLICE RESOL:100, 30 CC
3D MID	M STATION, FAST,ZIP4, FLUORO, VASC TOF SPGR, 3D, BODY COIL		MIN		30	83.33	46	4/36 LOC/ SLAB		<u>320</u> 192	.75	UNSWAP	:17	PFOV .80 SHIM AUTO, USER CV, TURBO MODE: 1, REV ELLIP:0,ELLIP CENTRIC CENTRIC:0, REV CENTRIC:0, SLICE RESOL:100

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Comments:

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