

# BODY MRI PROTOCOLS

## 1.5T



Leading Radiology Forward



# Table of Contents



- Non Specific.....3-5
- Renals.....6-8
- Adrenals.....9-11
- Pancreas.....12-14
- Liver.....15-17
- Liver No Gad.....18-21
- Liver Eovist.....22-24
- Liver Iron Quant.....25-29
- MRCP.....30-34
- ENTEROGRAPHY.....35-38
- FEMALE PELVIS.....39-
- S/P HYSTERECTOMY...
- MALE PELVIS.....
- PELVIS FISTULA.....
- PELVIS HX PROSTATE CA..
- PROSTATE W/O PROBE
- SCROTUM.....

# Non Specific – 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
3-PLANE LOC	48	MIN	80				62.50	320 x 192	1	8/2
Calibration scan	48									
Coronal SS-FSE	28- 44	min	90				62.50	320 x 224	1	8/2
Sagittal SS-FSE	28- 44	min	90				62.50	320 X 224	1	8/2
Axial SS-FSE	28- 44	min	90				62.50	320 x 224	1	8/2

**Adjust to Body Habitus, Optimize TR on FRFSE, Cover from above Liver/Spleen to Aortic Bifurcation.**

**Timing is 45s, 3min. Separate Sequences and subtract if Possible**



# Non Specific – 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
Axial FRFSE Fat Sat	28- 44	2400- 5800	90			12-24	41.67	256 x 160	.5	8/2
Axial Fiesta Fat Sat	28- 44		Min Full		75		83.33	256 x 256	1	8/2
Axial In/Out Phase	28- 44	200	2 Echoes		80			256 x 160	1	8/2
Axial LAVA Fat Sat Multiphase	28- 44				12		62.50	320 x 192	1	5/50
Coronal LAVA Fat Sat	28- 44				12	16	62.50	320 x 192	1	5/50

**Adjust to Body Habitus, Optimize TR on FRFSE, Cover from above Liver/Spleen to Aortic Bifurcation.**

**Timing is 45s, 3min. Separate Sequences and subtract if Possible**

## Notes:



- For non specific diagnosis
- Eg; Weight loss, pain, nausea, etc.
- Coverage is from above Liver/Spleen to aortic bifurcation and will include the Kidneys.
- All sequences are breath hold.
- Separate all dynamic sequences and perform subtraction on all timed views if possible.
- For LX systems use FAME to replace LAVA.
- Please call for protocols if necessary.

# Renals – 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
3-PLANE LOC	48	MIN	80				62.50	320 x 192	1	8/2
Calibration scan	48									
Coronal SS-FSE	28- 44	min	90				62.50	320 x 224	1	8/2
Sagittal SS-FSE	28- 44	min	90				62.50	320 X 224	1	8/2
Axial SS-FSE	28- 44	min	90				62.50	320 x 224	1	8/2

**Adjust to Body Habitus, Optimize TR on FRFSE, Cover from above Liver/Spleen to Aortic Bifurcation.**

**Timing is 25s, 90s, 3min. Separate Sequences and subtract if Possible**



# Renals – 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
Axial FRFSE Fat Sat	28- 44	2400- 5800	90			12-24	41.67	256 x 160	.5	8/2
Axial Fiesta Fat Sat	28- 44		Min Full		75		83.33	256 x 256	1	8/2
Axial In/Out Phase Kidneys	28- 44	200	2 Echoes		80			256 x 160	1	6/1.5
Axial LAVA Fat Sat Multiphase	28- 44				12		62.50	320 x 192	1	5/50
Coronal LAVA Fat Sat	28- 44				12		62.50	320 x 192	1	5/50

**Adjust to Body Habitus, Optimize TR on FRFSE, Cover from above Liver/Spleen to Aortic Bifurcation.**

**Timing is 25s, 90s, 3min. Separate Sequences and subtract if Possible**

## Notes:



- For renal specific diagnosis.
- Coverage is from above Liver/Spleen to aortic bifurcation and will include the Kidneys, except the In/Out of phase which is for kidneys
- All sequences are breath hold.
- Separate all dynamic sequences and perform subtraction on all timed views if possible.
- For LX systems use FAME to replace LAVA
- Please call for protocols if necessary.



# Adrenals – 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
3-PLANE LOC	48	MIN	80				62.50	320 x 192	1	8/2
Calibration scan	48									
Coronal SS-FSE	28- 44	min	90				62.50	320 x 224	1	8/2
Sagittal SS-FSE	28- 44	min	90				62.50	320 X 224	1	8/2
Axial SS-FSE	28- 44	min	90				62.50	320 x 224	1	8/2

**Adjust to Body Habitus, Optimize TR on FRFSE, Cover from above Liver/Spleen to Aortic Bifurcation.**

**Timing is 45s, 3min. Separate Sequences and subtract if Possible**

# Adrenals – 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
Axial FRFSE Fat Sat	28- 44	2400- 5800	90			12-24	41.67	256 x 160	.5	8/2
Axial Fiesta Fat Sat	28- 44		Min Full		75		83.33	256 x 256	1	8/2
Axial In/Out Phase	28- 44	200	2 Echoes		80			256 x 160	1	4/0
Axial LAVA Fat Sat Multiphase	28- 44				12		62.50	320 x 192	1	5/50
Coronal LAVA Fat Sat	28- 44				12	16	62.50	320 x 192	1	5/50

**Adjust to Body Habitus, Optimize TR on FRFSE, Cover from above Liver/Spleen to Aortic Bifurcation.**

**Timing is 45s, 3min. Separate Sequences and subtract if Possible**

## Notes:



- For adrenal specific diagnosis.
- Coverage is from above Liver/Spleen to aortic bifurcation and will include the Kidneys, except the In/Out of phase which is for adrenal glands
- All sequences are breath hold.
- Separate all dynamic sequences and perform subtraction on all timed views if possible.
- For LX systems use FAME to replace LAVA
- Please call for protocols if necessary.

# Pancreas – 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
3-PLANE LOC	48	MIN	80				62.50	320 x 192	1	8/2
Calibration scan	48									
Coronal SS-FSE	28- 44	min	90				62.50	320 x 224	1	8/2
Sagittal SS-FSE	28- 44	min	90				62.50	320 X 224	1	8/2
Axial SS-FSE	28- 44	min	90				62.50	320 x 224	1	8/2

**Adjust to Body Habitus, Optimize TR on FRFSE, Cover from above Liver/Spleen to Aortic Bifurcation.**

**Timing is 25s, 60s, 2min. Separate Sequences and subtract if Possible**

# Pancreas – 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
Axial FRFSE Fat Sat	28- 44	2400- 5800	90			12-24	41.67	256 x 160	.5	8/2
Axial Fiesta Fat Sat	28- 44		Min Full		75		83.33	256 x 256	1	8/2
Axial In/Out Phase	28- 44	200	2 Echoes		80			256 x 160	1	8/2
Axial LAVA Fat Sat Multiphase	28- 44		35		12		62.5	320 x 192	1	5/50
Coronal LAVA Fat Sat	28- 44				12		62.50	320 x 192	1	5/50

**Adjust to Body Habitus, Optimize TR on FRFSE, Cover from above Liver/Spleen to Aortic Bifurcation.**

**Timing is 25s, 60s, 2min. Separate Sequences and subtract if Possible**

## Notes:



- For pancreatic specific diagnosis.
- Coverage is from above Liver/Spleen to aortic bifurcation and will include the Kidneys.
- All sequences are breath hold.
- Separate all dynamic sequences and perform subtraction on all timed views if possible.
- For LX systems use FAME to replace LAVA.
- Please call for protocols if necessary.

# Liver – 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
3-PLANE LOC	48	MIN	80				62.50	320 x 192	1	8/2
Calibration scan	48									
Coronal SS-FSE	28- 44	min	90				62.50	320 x 224	1	8/2
Sagittal SS-FSE	28- 44	min	90				62.50	320 X 224	1	8/2
Axial SS-FSE	28- 44	min	90				62.50	320 x 224	1	8/2

**Adjust to Body Habitus, Optimize TR on FRFSE, Cover from above Liver/Spleen to Aortic Bifurcation.**

**Timing is 25s, 60s, 2min, 5min. Separate Sequences and subtract if Possible**

# Liver – 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
Axial FRFSE Fat Sat	28- 44	2400- 5800	90			12-24	41.67	256 x 160	.5	8/2
Axial Fiesta Fat Sat	28- 44		Min Full		75		83.33	256 x 256	1	8/2
Axial In/Out Phase	28- 44	200	2 Echoes		80			256 x 160	1	8/2
Axial LAVA Fat Sat Multiphase	28- 44				12		62.50	320 x 192	1	5/50
Coronal LAVA Fat Sat	28- 44				12	16	62.50	320 x 192	1	5/50

**Adjust to Body Habitus, Optimize TR on FRFSE, Cover from above Liver/Spleen to Aortic Bifurcation.**

**Timing is 25s, 60s, 2min, 5min. Separate Sequences and subtract if Possible**



## Notes:



- For Liver specific diagnosis.
- All liver exams need to be addressed to the radiologist for special instructions and protocol
- Coverage is from above Liver/Spleen to aortic bifurcation and will include the Kidneys.
- All sequences are breath hold.
- Separate all dynamic sequences and perform subtraction on all timed views if possible.
- For LX systems use FAME to replace LAVA.



# Liver No Gad – 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
3-PLANE LOC	48	MIN	80				62.50	320 x 192	1	8/2
Calibration scan	48									
Coronal SS-FSE	28- 44	min	90				62.50	320 x 224	1	8/2
Sagittal SS-FSE	28- 44	min	90				62.50	320 X 224	1	8/2
Axial SS-FSE	28- 44	min	90				62.50	320 x 224	1	8/2

**Adjust to Body Habitus, Optimize TR on FRFSE, Cover from above Liver/Spleen to Aortic Bifurcation.**

**Separate Sequences and subtract if Possible**



# Liver No Gad– 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
Axial FRFSE Fat Sat	28- 44	2400- 5800	90			12-24	41.67	256 x 160	.5	8/2
Axial Fiesta Fat Sat	28- 44		Min Full		75		83.33	256 x 256	1	8/2
Axial In/Out Phase	28- 44	200	2 Echoes		80			256 x 160	1	8/2
Axial LAVA Fat Sat	28- 44		35		12		62.50	320 x 192	1	5/50
Coronal LAVA Fat Sat	28- 44						62.50	320 x 192	1	5/50

**Adjust to Body Habitus, Optimize TR on FRFSE, Cover from above Liver/Spleen to Aortic Bifurcation.**

**Separate Sequences and subtract if Possible**

# Liver No Gad – 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
Axial DWI B-Value 400	28- 44		Min					128 x 128	1	8/2
Axial DWI B-Value 800	28- 44		Min					128 X 128	1	8/2

**Adjust to Body Habitus, Optimize TR on FRFSE, Cover from above Liver/Spleen to Aortic Bifurcation.**

**Separate Sequences and subtract if Possible** Run Multi Echo DWI if Available

## Notes:



- For Liver specific diagnosis.
- All liver exams need to be addressed to the radiologist for special instructions and protocol
- Coverage is from above Liver/Spleen to aortic bifurcation and will include the Kidneys.
- All sequences are breath hold.
- For LX systems use FAME to replace LAVA

# Liver Eovist – 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
3-PLANE LOC	48	MIN	80				62.50	320 x 192	1	8/2
Calibration scan	48									
Coronal SS-FSE	28- 44	min	90				62.50	320 x 224	1	8/2
Sagittal SS-FSE	28- 44	min	90				62.50	320 X 224	1	8/2
Axial SS-FSE	28- 44	min	90				62.50	320 x 224	1	8/2

**Adjust to Body Habitus, Optimize TR on FRFSE, Cover from above Liver/Spleen to Aortic Bifurcation.**

**Timing is 25s, 60s, 2min, 5min, 10min, 15min. Separate Sequences and subtract if Possible**



# Liver Eovist – 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
Axial FRFSE Fat Sat	28- 44	2400- 5800	90			12-24	41.67	256 x 160	.5	8/2
Axial Fiesta Fat Sat	28- 44		Min Full		75		83.33	256 x 256	1	8/2
Axial In/Out Phase	28- 44	200	2 Echoes		80			256 x 160	1	8/2
Axial LAVA Fat Sat Multiphase	28- 44				12		62.50	320 x 192	1	5/50
Coronal LAVA Fat Sat	28- 44				12		62.50	320 x 192	1	5/50

**Adjust to Body Habitus, Optimize TR on FRFSE, Cover from above Liver/Spleen to Aortic Bifurcation.**

**Timing is 25s, 60s, 2min, 5min, 10min, 15min. Separate Sequences and subtract if Possible**

## Notes:



- For Liver specific diagnosis.
- All liver exams need to be addressed to the radiologist for special instructions and protocol
- Coverage is from above Liver/Spleen to aortic bifurcation and will include the Kidneys.
- All sequences are breath hold.
- Separate all dynamic sequences and perform subtraction on all timed views if possible.
- For HDxT or higher systems unless specified by radiologist on a case by case basis.





# Liver Iron Quant – 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
3-PLANE LOC	48	MIN	80				62.50	320 x 192	1	8/2
Calibration scan	48									
Coronal SS-FSE	28- 44	min	90				62.50	320 x 224	1	8/2
Axial SS-FSE	28- 44	min	90				62.50	320 X 224	1	8/2
Axial FRFSE Fat Sat	28- 44	2400- 5800	90			12-24	41.63	256 x 160	.5	8/2

**Adjust to Body Habitus, Optimize TR on FRFSE, Cover from above Liver/Spleen to Aortic Bifurcation. Cover Liver on FGRE sequences  
Separate Sequences and subtract if Possible**



# Liver Iron Quant – 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
Axial In/Out Phase	28-44	200	2 Echoes		80			256 x 160	1	8/2
Axial T1 FGRE	28-44	120	4		90		62.59	256 x 160	1	8/2
Axial PD FGRE	28-44	120	4		20		62.50	256 x 160	1	8/2
Axial T2 FGRE TE=9	28-44	120	9		20		62.50	256 x 160	1	5/50
Axial T2 FGRE TE=14	28-44	120	14		20		22.73	256 x 160	1	5/50

**Adjust to Body Habitus, Optimize TR on FRFSE, Cover from above Liver/Spleen to Aortic Bifurcation. Cover Liver on FGRE sequences  
Separate Sequences and subtract if Possible**



# Liver Iron Quant – 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
Axial T2 FGRE TE=21	28- 44	120	21		20		5.95	256 x 160	1	8/2

**Adjust to Body Habitus, Optimize TR on FRFSE, Cover from above Liver/Spleen to Aortic Bifurcation. Cover Liver on FGRE sequences**

## Notes:



- For Liver specific diagnosis.
- All liver exams need to be addressed to the radiologist for special instructions and protocol
- Coverage is from above Liver/Spleen to aortic bifurcation and will include the Kidneys for all sequences up to and including the In/Out of phase.
- The following gradient series are TR, TE, And flip angle dependent and are not to be adjusted. The entire liver does not need to covered. See diagram.
- All sequences are breath hold.

Diagrams:



# MRCP – 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
3-PLANE LOC	48	MIN	80				62.50	320 x 192	1	8/2
Calibration scan	48									
Coronal SS-FSE	28- 44	min	90				62.50	320 x 224	1	8/2
Sagittal SS-FSE	28- 44	min	90				62.50	320 X 224	1	8/2
Axial SS-FSE	28- 44	min	90				62.50	320 x 224	1	8/2

**Adjust to Body Habitus, Optimize TR on FRFSE, Cover from above Liver/Spleen to Aortic Bifurcation.**

**Separate Sequences and subtract if Possible**

# MRCP – 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
Axial Lava	28-44		35			12-24	41.67	256 x 160	.5	8/2
Axial Fiesta Fat Sat	28-44		Min Full		75		83.33	256 x 256	1	8/2
Axial In/Out Phase	28-44	200	2 Echoes		80			256 x 160	1	8/2

**Adjust to Body Habitus, Optimize TR on FRFSE, Cover from above Liver/Spleen to Aortic Bifurcation.**

# MRCP – 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
Obl Coronal MRCP Resp Trigger	34	3	Min					320 x 320	1	1.4/58
Axial Thin Slice MRCP SSFSE	28- 44	Min	250				62.50	320 X 224	1	4/0
Cor Thin Slice MRCP SSFSE	34	Min	250				62.50	320 X 224	1	4/0

**On MRCP sequences cover entire Biliary Tree**



## Notes:



- For Biliary specific diagnosis.
- Coverage is from above Liver/Spleen to aortic bifurcation and will include the Kidneys for all series up to the In/Out of phase.
- The sequences on the following page are specific for the biliary tree.
- All sequences are breath hold, except for 3D respiratory trigger MRCP coronal
- For LX systems use FAME to replace LAVA, and use radial thick slice to replace 3D resp. trigger coronal

# Enterography – 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
3-PLANE LOC	48	MIN	80				62.50	320 x 192	1	8/2
Calibration scan	48									
Coronal SS-FSE	28- 44	min	90				62.50	320 x 224	1	8/2
Sagittal SS-FSE	28- 44	min	90				62.50	320 X 224	1	8/2
Axial SS-FSE	28- 44	min	90				62.50	320 x 224	1	8/2

# Enterography – 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
Axial SSFSE Fat Sat	28- 44	Min	90				62.50	320 x 224	1	8/2
Axial IR	28- 44		Min Full	140			31.83	320 x 224	.5	8/2
Cor LAVA Fat Sat	28- 44	200	2 Echoes		80			256 x 160	1	8/2
Cor LAVA Fat Sat+C	28- 44				12		62.50	320 x 192	1	5/50
Axial LAVA Fat Sat+C	28- 44				12	16	62.50	320 x 192	1	6/50

**Adjust to Body Habitus, Coverage should be to adjusted to include abdominal portion of the small bowel (do not have to cover entire liver). Contrast imaging is not dynamic.**

# Enterography – 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
Sagittal FSPGR Fat Sat	26	120- 200	In Phase		80		31.83	256 X 128	1	5/0
Axial FSPGR fat sat	26	120- 200	In Phase		80		31.83	256 X 128	1	5/0
Axial FRFSE T2 Fat Sat	26	2400- 4800	85				62.50	256 X 160	.5	5/0

**Patient should empty bladder prior to doing the above pelvic sequences.  
Coverage is for pelvis with small overlap of abdominal coverage.**

## Notes:



- For inflammatory bowel disease. Eg; Crohn's disease, ulcerative colitis.
- Coverage is from top of stomach to pubis symphysis.
- Separate abdomen and pelvic axial slices with overlap for better signal, fat suppression, and decreased artifacts.
- Follow prep in Enterography protocol memo.
- Post LAVA/Fame sequences are for small FOV pelvis, adjust coil as needed
- Only for systems with abd/pelvic multi channel coil.

# Patient prep



- **Scheduling and Prep:**

- Low-residue diet for 5 days before the procedure is ideal but not required, nor any other specific bowel prep.
- Prescriptions needed for exam is **20 mg Metoclopramide (Reglan)** and **1 mg glucagon** from the Referring MD. If pt is Diabetic glucagon is NOT administered
- Patients must **fast for 6 hours** prior to exam time.

- **Pre-Exam Procedure:**

- Patients need to arrive to the center at least **1 hour** before the exam.
- Upon arrival, patient is to take **20 mg Metoclopramide (Reglan)** orally.
- Patient is then given 1350 ml total (3-450 ml bottles) of **Breeza (Oral contrast)** to drink. **1 bottle is given at the time of arrival**, and another **1 bottle 25-30 minutes later**. (Last bottle is reserved for just before the start of exam.

- **Start of Exam:**

- **Glucagon 1 mg** is administered intravenously for **30-60 seconds** to reduce bowel peristalsis.

# Female Pelvis – 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
3-PLANE LOC	48	MIN	80				62.50	320 x 192	1	8/2
Calibration scan	48									
Sagittal FRFSE T2	24	2400 - 8000	85				32.83	256 x 192	2	5/0
Obl parallel to uterus FRFSE T2	24	2400- 8000	85				32-83	256 X 192	2	5/0
Oblique perpendicular to uterus FRFSE T2	24	2400- 8000	85				32.83	256 x 192	2	5/0

# Female Pelvis – 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
Axial T2 FRFSE large FOV	36	3000	85				31.25	320 x 224	2	5/1.5
Axial T2 FRFSE fat sat largeg FOV	36	3000	85				31.25	320 X 224	2	5/1.5
Axial FSPGR	24	120- 200	In phase		80		31.25	256 X 128	1	5/0
Ax FSPGR fat sat	24	120- 200	In phase		80		31.25	256 X 128	1	5/0
Ax FSPGR Fat sat pre	24	120- 200	In phase		80		31.25	256 X 128	1	5/0





# Female Pelvis – 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
Ax FSPGR fat sat post	324	120- 200	In phase		80		31.25	256 x 128	1	5/0
Sag FSPGR fat sat post	24	120- 200	In phase		80		31.25	256 X 128	1	5/0
Ax Lava Fat sat pre	24						62.50	320 X 192	1	5/44
Ax Lava Fat sat 30, 60, 90 sec	24						62.50	320 X 192	1	5/44



# Female Pelvis Hysterectomy-1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
3-PLANE LOC	48	MIN	80				62.50	320 x 192	1	8/2
Calibration scan	48									
Sagittal FRFSE T2	24	2400 - 8000	85				32.83	256 x 192	2	5/0
Coronal FRFSE T2	24	2400- 8000	85				32-83	256 X 192	2	5/0
Axial FRFSE T2 Optional	24	2400- 8000	85				32.83	256 x 192	2	5/0



# Female Pelvis Hysterectomy-1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
Axial T2 FRFSE large FOV	36	3000	85				31.25	320 x 224	2	5/1.5
Axial T2 FRFSE fat sat lg FOV	36	3000	85				31.25	320 X 224	2	5/1.5
Axial FSPGR	24	120- 200	In phase		80		31.25	256 X 128	1	5/0
Ax FSPGR fat sat	24	120- 200	In phase		80		31.25	256 X 128	1	5/0
Ax FSPGR Fat sat pre	24	120- 200	In phase		80		31.25	256 X 128	1	5/0



# Female Pelvis Hysterectomy-1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
Ax FSPGR fat sat post	324	120- 200	In phase		80		31.25	256 x 128	1	5/0
Sag FSPGR fat sat post	24	120- 200	In phase		80		31.25	256 X 128	1	5/0
Ax Lava Fat sat pre	24						62.50	320 X 192	1	5/44
Ax Lava Fat sat 30, 60, 90 sec	24						62.50	320 X 192	1	5/44



# Male Pelvis - 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
3-PLANE LOC	48	MIN	80				62.50	320 x 192	1	8/2
Calibration scan	48									
Sagittal FRFSE T <sub>2</sub>	24	2400 - 8000	85				32.83	256 x 192	2	5/0
Coronal FRFSE T <sub>2</sub>	36	2400- 8000	85				32-83	256 X 192	2	5/1
Axial T <sub>1</sub>	26	500	Min full				32.83	256 x 192	1.5	5/1

# Male Pelvis -1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
Axial T2 FRFSE	26	3000	85				31.25	320 X 224	2	5/1
Axial T2 FRFSE fat sat	26	3000	85				31.25	320 X 224	2	5/1
Axial FSPGR	26	120- 200	In phase		80		31.25	256 X 128	1	5/1
Ax FSPGR fat sat	26	120- 200	In phase		80		31.25	256 X 128	1	5/1
Ax FSPGR Fat sat pre	26	120- 200	In phase		80		31.25	256 X 128	1	5/1



# Male Pelvis -1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
Ax FSPGR fat sat post	324	120- 200	In phase		80		31.25	256 x 128	1	5/1
Sag FSPGR fat sat post	26	120- 200	In phase		80		31.25	256 X 128	1	5/1
Ax Lava Fat sat pre	26						62.50	320 X 192	1	5/44
Ax Lava Fat sat 30, 60, 90 sec	26						62.50	320 X 192	1	5/44

# Pelvis Fistula - 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
3-PLANE LOC	48	MIN	80				62.50	320 x 192	1	8/2
Calibration scan	48									
Sagittal FRFSE T <sub>2</sub>	24	2400 - 8000	85				32.83	256 x 192	2	4/1
Axial FRFSE T <sub>2</sub>	24	2400- 8000	85				32-83	256 X 192	2	4/1
Axial T <sub>1</sub>	24	500	Min full				32.83	256 x 192	1.5	4/1



# Pelvis Fistula -1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
Axial IR	24	3000	42	140			31.25	320 x 224	2	4/1
Axial FSPGR	24	120- 200	In phase		80		31.25	256 X 128	1	4/1
Ax FSPGR fat sat	24	120- 200	In phase		80		31.25	256 X 128	1	4/1
Ax FSPGR fat sat +C	24	120- 200	In phase		80		31.25	256 X 128	1	4/1
Cor FSPGR Fat sat +C	24	120- 200	In phase		80		31.25	256 X 128	1	4/1

# Pelvis Fistula -1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
Sag FSPGR fat sat +C	324	120- 200	In phase		80		31.25	256 x 128	1	4/1
Optional										
Ax Lava Fat sat pre	26						62.50	320 X 192	1	5/44
Ax Lava Fat sat 30, 60, 90 sec	26						62.50	320 X 192	1	5/44



# Male Pelvis HX Prostate CA- 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
3-PLANE LOC	48	MIN	80				62.50	320 x 192	1	8/2
Calibration scan	48									
Sagittal FRFSE T <sub>2</sub>	24	2400 - 8000	85				32.83	256 x 192	2	5/1
Coronal IR	36	3000	42	140			32-83	256 X 192	2	5/1
Coronal T <sub>1</sub>	36	500	Min full				32.83	256 x 192	2	5/1



# Male Pelvis HX Prostate CA-1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
Axial T2 FRFSE	26	3000	85				31.25	320 X 224	2	5/1
Axial T2 FRFSE fat sat	26	3000	85				31.25	320 X 224	2	5/1
Axial FSPGR	26	120- 200	In phase		80		31.25	256 X 128	1	5/1
Ax FSPGR fat sat	26	120- 200	In phase		80		31.25	256 X 128	1	5/1
Ax FSPGR Fat sat pre	26	120- 200	In phase		80		31.25	256 X 128	1	5/1



# Male Pelvis HX Prostate CA-1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
Ax FSPGR fat sat post	324	120- 200	In phase		80		31.25	256 x 128	1	5/1
Sag FSPGR fat sat post	26	120- 200	In phase		80		31.25	256 X 128	1	5/1
Ax Lava Fat sat pre	26						62.50	320 X 192	1	5/44
Ax Lava Fat sat 30, 60, 90 sec	26						62.50	320 X 192	1	5/44



# Prostate w/o probe - 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
3-PLANE LOC	48	MIN	80				62.50	320 x 192	1	8/2
Calibration scan	48									
Coronal T1	36	500	Min Full				32.83	256 x 192	2	5/1
Axial T1	24	500	Min Full				32-83	256 X 160	1.5	5/0
Axial T2 FRFSE	24	2400- 8000	85				32.83	256 x 192	2	5/0



# Prostate w/o probe -1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
Axial FSPGR Fat sat	24	120- 200	In phase				31.25	256 x 128	1	5/0
Sagittal T2	16	3000	85				31.25	256 X 224	4	4/0.4
Axial T2	16	3000	85				31.25	256 X 224	4	4/0.4
Axial FSPGR	16	120- 200	In phase		80		15.63	256 X 192	2	4/0.4
Ax FSPGR Fat sat pre	16	120- 200	In phase		80		15.63	256 X 192	2	4/0.4



# Prostate w/o probe -1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
Ax FSPGR fat sat post	16	120- 200	In phase		80		15.63	256 x 192	2	4/0.4
Ax FSPGR fat sat post	24	120- 200	In phase		80		31.25	256 X 128	1	5/0



# Scrotum - 1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
3-PLANE LOC	48	MIN	80				62.50	320 x 192	1	8/2
Calibration scan	48									
Axial T2 FRFSE	36	2400 - 8000	85				32.83	256 x 192	2	5/1
Coronal FRFSE T2	36	2400- 8000	85				32-83	256 X 192	2	5/1
Sagittal T2	16	3000	85				20.83	256 x 224	4	4/0.4

# Scrotum -1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
Axial T2	16	3000	85				20.83	256 x 224	4	4/0.4
Coronal T2	16	3000	85				20.83	256 X 224	4	4/0.4
Axial FSPGR	16	120- 200	In phase		80		31.25	256 X 128	1	5/1
Ax FSPGR Fat sat	16	120- 200	In phase		80		31.25	256 X 128	1	5/1
Ax FSPGR Fat sat post	16	120- 200	In phase		80		31.25	256 X 128	1	5/1

# Scrotum -1.5T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
Sag FSPGR fat sat post	16	120- 200	In phase		80		31.25	256 x 128	1	5/1

# Rectal Cancer - 3T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
3-PLANE LOC	48	MIN	80				62.50	320 x 192	1	8/2
Calibration scan	48									
Sagittal FRFSE T2	22	2400 - 8000	85				50	256 x 192	2	3/0.5
Axial FRFSE T2	22	2400- 8000	85				50	256 X 192	2	3/0.5
Cor FRFSE T2	22	2400- 8000	85				50	256 X 192	2	3/0.5
Axial T1	24	400- 795	Min-Full				25	320 x 224	2	4/1

Freq direction - Sag A/P, Cor S/I, Ax R/L.

# Rectal Cancer - 3T



Sequence	FOV	TR	TE	TI	Flip	ETL	BW	Matrix	Nex	Slice
Axial IR	24	3000	42	190			41.67	320 x 192	2	4/1
Axial FSPGR BH	24	120- 200	In phase		80		31.25	256 X 192	1	4/1
Ax FSPGR fat sat pre BH	24	120- 200	In phase		80		31.25	256 X 192	1	4/1
Ax FSPGR fat sat post BH	24	120- 200	In phase		80		31.25	256 X 192	1	4/1
Cor FSPGR Fat sat post BH	24	120- 200	In phase		80		31.25	256 X 192	1	4/1
Sag FSPGR fat sat post BH	324	120- 200	In phase		80		31.25	256 x 192	1	4/1

Notes:



- Notes
- Notes

Diagrams:

