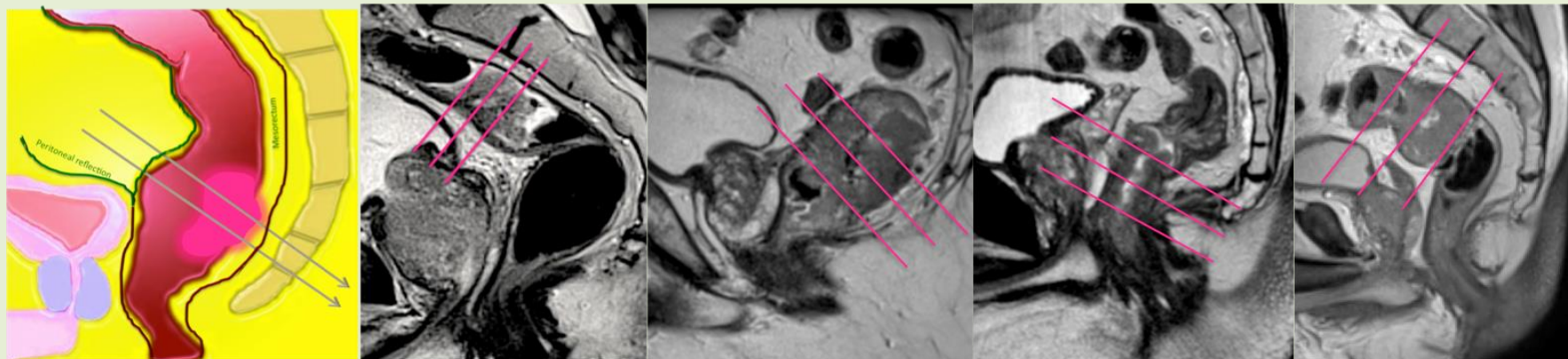


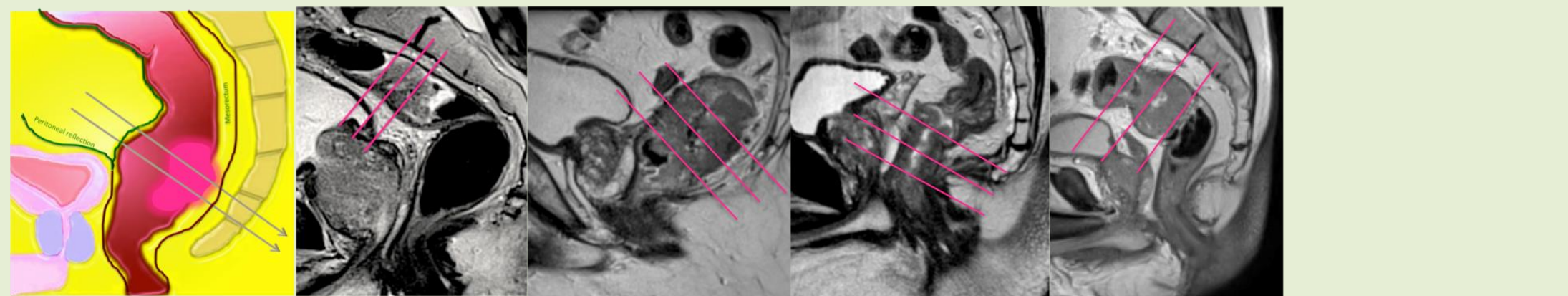
Protocol: 1.5T RECTUM GE

Region to Scan:	Rectum					
Patient position:	Supine					
Coil:	Phased-array surface coil positioned such that the lower edge of the coil lies below the pubic bone.					
Patient Preparation:	Use of rectal contrast and IV contrast is not recommended (ESGAR 2012 Guidelines).					
Sequence	Axial T2	Coronal T2	Sagittal T2	Oblique Axial T2	Oblique Coronal T2	DIFFUSION
Generic sequence name	FRFSE T2	FRFSE T2	FRFSE T2	FRFSE T2	FRFSE T2	2D
Plane	Axial	Coronal	Sagittal	Oblique Axial	Oblique Coronal	Axial
Options	Fast/NPW/ED	Fast/NPW/ED	Fast/NPW/ED	Fast/NPW/ED	Fast/NPW/ED	EPI, DIFF
Field of View (cm)	18-26	18-26	18-26	18-26	18-26	28-36
Slice Thickness (mm)	5	4	4	3	3	5
Gap (mm)	1	1	1	1	1	1
Saturation Pulse	S/I/A	NA	A	S/I/A	A	N/A
TE1 / TE2	102	102	102	102	102	Min
TR	4000-6000	4000-6000	4000-6000	4000-6000	4000-6000	3500
Flip Angle	90	90	90	90	90	N/A
Bandwidth (kHz)	32	32	32	32	32	N/A
ETL	24	24	24	24	24	Na
NEX	3	3	3	3	3	6
Phase Encoding Steps	192	192	192	192	192	128
Frequency Steps	320	320	320	320	320	128
Frequency Direction	A/P	S/I	R/L	R/L	R/L	A/P
Comments	<ul style="list-style-type: none"> ✓ Since assessment of tumor extent on the T2-WI is based on the intrinsic contrast between the high-signal-intensity mesorectal fat and the relatively low signal intensity of the tumor, fat suppression technique is absolutely not recommended ✓ Placement of the orthogonal plane is based on the tumor location on the sagittal T2W at the level where the tumor extends within the mesorectal fat 					



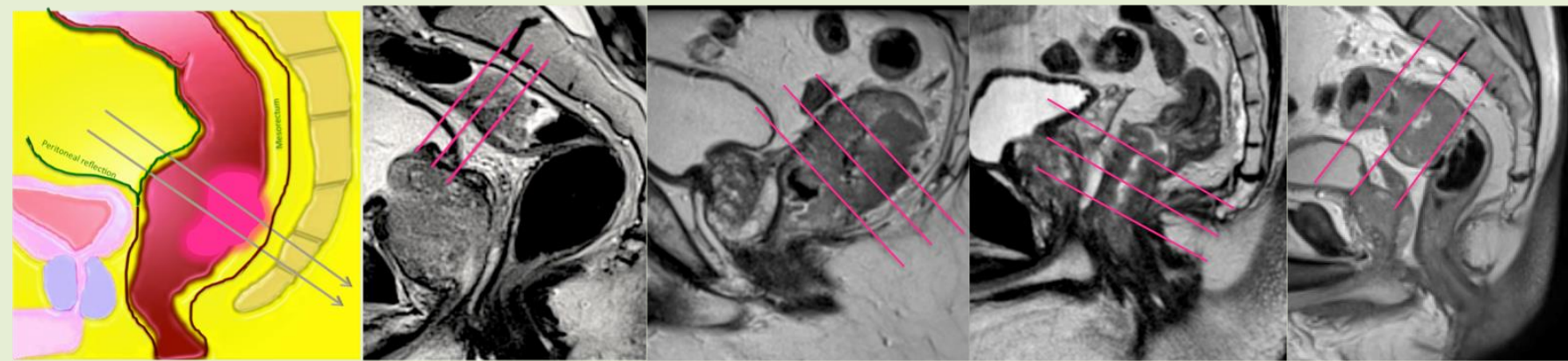
Protocol: 1.5T RECTUM SIEMENS

Region to Scan:	Rectum					
Patient position:	Supine					
Coil:	Phased-array surface coil positioned such that the lower edge of the coil lies below the pubic bone.					
Patient Preparation:	Use of rectal contrast and IV contrast is not recommended (ESGAR 2012 Guidelines).					
Sequence	Axial T2	Coronal T2	Sagittal T2	Oblique Axial T2	Oblique Coronal T2	DWI
Generic sequence name	FRFSE T2	FRFSE T2	FRFSE T2	FRFSE T2	FRFSE T2	DWI
Plane	Axial	Coronal	Sagittal	Oblique Axial	Oblique Coronal	Axial
Options						EPI, b0, b500,b100
Field of View (cm)	38	18	38	18	18	
Slice Thickness (mm)	5	3	3	3	3	5
Gap (mm)	1	0	0	0	0	1
Saturation Pulse	S/II	A	A	A	A	
TE1 / TE2	90-150	90-150	90-150	90-150	90-150	Min
TR	3500-5000	3500-5000	3500-5000	3500-5000	3500-5000	4000
Flip Angle	90	90	90	90	90	
Bandwidth (kHz)	32	32	32	32	32	
ETL	24	24	24	24	24	
NEX	4	2	2	2	2	4
Phase Encoding Steps	320	240	240	256	256	128
Frequency Steps	320	320	320	256	256	128
Frequency Direction	A/P	S/I	R/L	A/P	A/P	R/L
Comments	<ul style="list-style-type: none"> ✓ Since assessment of tumor extent on the T2-WI is based on the intrinsic contrast between the high-signal-intensity mesorectal fat and the relatively low signal intensity of the tumor, fat suppression technique is absolutely not recommended ✓ Placement of the orthogonal plane is based on the tumor location on the sagittal T2W at the level where the tumor extends within the mesorectal fat 					

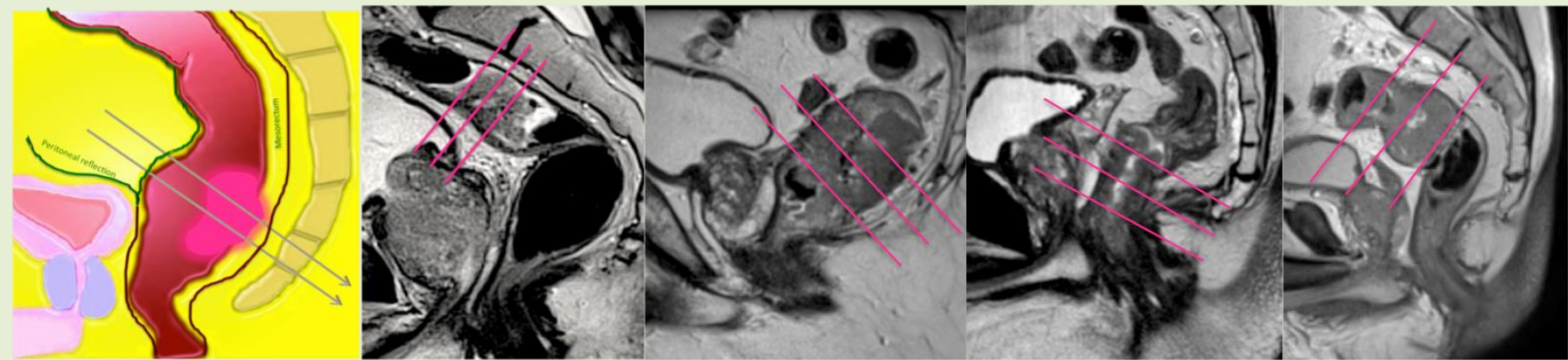


Protocol: 3T PHILIPS

Region to Scan:	Rectum					
Patient position:	Supine					
Coil:	Phased-array surface coil positioned such that the lower edge of the coil lies below the pubic bone.					
Patient Preparation:	Use of rectal contrast and IV contrast is not recommended (ESGAR 2012 Guidelines).					
Sequence	Axial T2	Coronal T2	Sagittal T2	Oblique Axial T2	Oblique Coronal T2	DWI
Generic sequence name	TSE T2	TSE T2	TSE T2	TSE T2	TSE T2	DWI
Plane	Axial	Coronal	Sagittal	Oblique Axial	Oblique Coronal	Axial
Options	FC	FC	FC	FC	FC	
Field of View (cm)	20-24	22-22	18	18	18	24
Slice Thickness (mm)	5	3	4	3	3	4
Gap (mm)	1	1	1	1	1	1
Saturation Pulse	NA	NA	NA	NA	NA	NA
TE1 / TE2	100	100	100	100	100	shortest
TR	4000-6000	4000-6000	4000-6000	4000-6000	4000-6000	2500-6500
Flip Angle	90	90	90	90	90	90
Bandwidth (kHz)	87.5kHz	87.5kHz	87.5kHz	87.5kHz	87.5kHz	128kHz
ETL	15-30	15-30	15-30	15-30	15-30	NA
NEX	2	3	1	4	4	1
Phase Encoding Steps	360	320	348	360	300	280
Frequency Steps	220	220	248	240	200	160
Frequency Direction	R/L	R/L	A/P	R/L	R/L	R/L
Comments	<ul style="list-style-type: none"> ✓ Since assessment of tumor extent on the T2-WI is based on the intrinsic contrast between the high-signal-intensity mesorectal fat and the relatively low signal intensity of the tumor, fat suppression technique is absolutely not recommended ✓ Placement of the orthogonal plane is based on the tumor location on the sagittal T2W at the level where the tumor extends within the mesorectal fat 					



Protocol: 3 T RECTUM GE						
Region to Scan:	Rectum					
Patient position:	Supine					
Coil:	Phased-array surface coil positioned such that the lower edge of the coil lies below the pubic bone.					
Patient Preparation:	Use of rectal contrast and IV contrast is not recommended (ESGAR 2012 Guidelines).					
Sequence	Axial T2	Coronal T2	Sagittal T2	Oblique Axial T2	Oblique Coronal T2	DWI
Generic sequence name	FRFSE T2	FRFSE T2	FRFSE T2	FRFSE T2	FRFSE T2	DWI
Plane	Axial	Coronal	Sagittal	Oblique Axial	Oblique Coronal	Axial
Options	Fast/ NPW/ ED	Fast/ NPW/ ED	Fast/ NPW/ ED	Fast/ NPW/ ED	Fast/ NPW/ ED	EPI, b0, b400,b800 Directions All
Field of View (cm)	16-24	16-24	16-24	16-24	16-24	Match T2 Axial
Slice Thickness (mm)	5	4	4	3	3	5
Gap (mm)	1	1	1	1	1	1
Saturation Pulse	S/I/A	NA	A	S/I/A	A	
TE1 / TE2	120	120	120	120	120	80
TR	4000-6000	4000-6000	4000-6000	4000-6000	4000-6000	3500
Flip Angle	90	90	90	90	90	90
Bandwidth (kHz)	32	32	32	32	32	NA
ETL	23	23	23	23	23	
NEX	4	4	4	4	3	4
Phase Encoding Steps	224	224	224	224	224	128
Frequency Steps	320	320	320	320	320	128
Frequency Direction	A/P	S/I	R/L	R/L	R/L	R/L
Comments	<ul style="list-style-type: none"> ✓ Since assessment of tumor extent on the T2-WI is based on the intrinsic contrast between the high-signal-intensity mesorectal fat and the relatively low signal intensity of the tumor, fat suppression technique is absolutely not recommended ✓ Placement of the orthogonal plane is based on the tumor location on the sagittal T2W at the level where the tumor extends within the mesorectal fat 					



Protocol: 3T RECTUM SIEMENS						
Region to Scan:	Rectum					
Patient position:	Supine					
Coil:	Phased-array surface coil positioned such that the lower edge of the coil lies below the pubic bone.					
Patient Preparation:	Use of rectal contrast and IV contrast is not recommended (ESGAR 2012 Guidelines).					
Sequence	Axial T2	Coronal T2	Sagittal T2	Oblique Axial T2	Oblique Coronal T2	DWI
Generic sequence name	FRFSE T2	FRFSE T2	FRFSE T2	FRFSE T2	FRFSE T2	DWI
Plane	Axial	Coronal	Sagittal	Oblique Axial	Oblique Coronal	Axial
Options						EPI, b0, b400,b800 Directions All
Field of View (cm)	38	18	38	18	18	
Slice Thickness (mm)	5	3	3	3	3	5
Gap (mm)	1	0	0	0	0	1
Saturation Pulse	S/II	A	A	A	A	
TE1 / TE2	95	97	97	97	97	68
TR	2000	300-6000	300-6000	300-6000	300-6000	7900
Flip Angle	150	150	150	150	150	
Bandwidth (kHz)	710	401	401	401	401	1184
ETL	200	25	23	25	25	
NEX	4	2	2	2	2	4
Phase Encoding Steps	320	240	240	208	208	192
Frequency Steps	320	320	320	320	320	192
Frequency Direction	A/P	S/I	R/L	A/P	A/P	R/L
Comments	<ul style="list-style-type: none"> ✓ Since assessment of tumor extent on the T2-WI is based on the intrinsic contrast between the high-signal-intensity mesorectal fat and the relatively low signal intensity of the tumor, fat suppression technique is absolutely not recommended ✓ Placement of the orthogonal plane is based on the tumor location on the sagittal T2W at the level where the tumor extends within the mesorectal fat 					

