## Radiology of Indiana

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		***	0.417.4.40
Protocols	.7/ 1.2/ 1.5T	3.0 T	Special Instructions/Comments
	** All Sagittals, please sci	an from patients Left to Right **	
Brachial Plexus (bilateral)			
Diacinal Fixus (blattia)	Coronal T1 TSE (3sk1)	SAME	For Bilateral Brachial Plexus
	Axial T1 TSE (3sk1)		scan shoulder to shoulder
	Axial STIR (3sk1)		FOV= 25cm preferred: 32cm as needed
	Sagittal T1 TSE (3s1)		
	Sagittal STIR (3sk1)		
	Coronal STIR (3sk1)		
	Axial C+T1 fat sat		
	Coronal C+T1 fat sat		
Brachial Plexus (unilateral)			
Diucinia Fickio (uninteria)	Coronal T1 TSE (3sk1)	SAME	For unilateral Brachial Plexus, Scan far transverse process through shoulder (i.e. for
	Axial T1 TSE (3sk1)		LEFT brachial Plexus, Start at RIGHT C7 transverse process )
	Coronal STIR (3sk1)		FOV=25cm
	Sagittal T1 TSE (3sk1)		
	Sagittal STIR (3sk1)		
	Axial STIR (3sk1)		
	Axial C+T1 fat sat		
	Coronal C+T1 fat sat		
		+	
Brain Cancer			
Divid Carci	Sagittal T1 TSE (4sk1)	Sagittal T1 FLAIR (3sk1)	Remove eADC from all protocols, should only do ADC
	Axial T1 TSE (4sk1)	Axial T1 FLAIR (3sk1)	Inject centre, following immediately by Axial T2
	Axial T2 GRE (4sk1)	SWI (3sk1) with Mis	Axial and coronal contrast enhanced T1s to follow T2 to allow contrast circulation time
	Axial DWI/ADC (3 Direction if possible ), reconstruct at 5sk0	Resolve or 6-Direction DWI/ADC, reconstruct at 4sk0	
	Axial FLAIR FAT SAT (4sk1)	Axial FLAIR FAT SAT (3sk1)	Scan through whole brain (skull to skull) on sagittal images
	Axial C+ T2 TSE (4sk1)	Axial C+ T2 TSE (3sk1)	
	Axial C+ T1 TSE (4sk1)	Axial C+T1 FLAIR (3sk1)	FOV=23cm
	Coronal C+ TSE (4sk1)	Coronal C+FLAIR (3sk1)	
	Sagittal C+ T1 TSE (4sk1)  Axial C+ T1 MPRAGE volumetric	Sagittal C+ T1 FLAIR (3sk1)	
	Axial C+ 11 MPRAGE volumetric Sagittal and coronal reformats	Axial Volumetric (MPRAGE or equivalent) with 3-plane reformat See if Perfusion/Spectroscopy needed	
	Possible Perfusion/Spectroscopy?	See ii Periusion/Spectroscopy needed	
	Should be done on 3T if possible		
	bridge done on 31 it possible		
	** Brain Cancer protocol used for patients that have/had a known brain lesion	on (including post surgical/post treatment lesions), lesion seen on another stud	y (i.e. CT Head), or any patient with a current dx of cancer,
	suspected cancer, or history of cancer for which metastatic disease to the bra	in is being evaluated	
MRI Brain (Contrast Clearance Analysis)	AD THE		
	3D T1-weighted (MPRAGE, FSPGR, VIBE, SPACE, etc.) 3D T1-weighted C+ (MPRAGE, FSPGR, VIBE, SPACE, etc.)	: 5	* It is important that the early time point is at a fixed time post-Gd injection, therefore, it is best to acquire it after a fixed protocol, e.g., after DSCMRI and 2D spin-echo or after DCE-MRI.
	3D T1-weighted C+ (MPRAGE, FSPGR, VIBE, SPACE, etc.)  3D T1-weighted C+ (MPRAGE, FSPGR, VIBE, SPACE, etc.)	5 minutes post Gad 60 - 105 minutes post Gad (patient can leave between both scans)	It is important that the early time point is a fried time post-out injection, in circular, it is not acquire it and at a fried protection, e.g., after DS-SWM and 2D spin-ection of after DS-SWM. The timing of the later time point is flexible and can change from one follow-up to the next as long as it is acquired between 60-105 min post Gd.
	3D 11-weighted C+ (MFKAGE, FSFGK, VIDE, SFACE, etc.)	00 - 103 minutes post Gau (patient can leave between both scans)	
		FOV = 23 all sequences	* IV bolus injection of a Gd-based contrast agent (standard dose, 0.1mmol/kg) is required.
			*T1-weighting of the MRI sequence does not change between the two acquisitions; thus the exact same protocol should be used for both scans (same FOV, slab size, etc.).
			* Poor image quality or metal-induced artifacts may affect the interpretation s
Brain With			
	Sagittal T1 TSE (4sk1)	Sagittal T1 FLAIR (3sk1)	Remove eADC from all protocols, should only do ADC  Inject contrast, followed immediately by Axial T2
	Axial T1 TSE (4sk1) Axial T2 TSE (4sk1)	Axial T1 FLAIR (3sk1) Axial T2 TSE (3sk1)	Inject contrast , followed immediately by Axial 12  Scan Through whole brain (skull to skull) on sagittal images
	Axial 12 1SE (48k1)  Axial T2 GRE (48k1)	SWI (3sk1) with MIPS	Scan Infogur whose train (Skuli to Skuli to Skul
	Axial DWI/ADC (3 Direction if possible ), reconstruct at 5sk0	Resolve or 6-Direction DWI/ADC, reconstruct at 4sk0	The state of the s
	Axial FLAIR FAT SAT (4sk1)	Axial FLAIR FAT SAT (3sk1)	Scan through whole brain (skull to skull) on sagittal images
	Axial C+ T2 TSE (4sk1)	Axial C+ T2 TSE (3sk1)	
	Axial C+ T1 TSE (4sk1)	Axial C+T1 FLAIR (3sk1)	FOV=23cm
	Coronal C+ TSE (4sk1)	Coronal C+FLAIR (3sk1)	
Donie XIII			
Brain Without	Sagittal T1 TSE (4sk1)	Sagittal T1 FLAIR (3sk1)	Remove eADC from all protocols
	Axial T1 TSE (4sk1)  Axial T1 TSE (4sk1)	Axial T1 FLAIR (3sk1)	Temperature and the property of the property o
	Axial T2 TSE (4sk1)	Axial T2 TSE (3sk1)	Scan Through whole brain (skull to skull) on sagittal images
	Axial T2 GRE (4sk1)	SWI (3sk1) with MIPS	
	Axial DWI/ADC (3 direction if possible), reconstruct at 5sk0	Resolve or 16-direction DWI/ADC reconstruct at 4sk0	FOV=23cm
	Axial FLAIR FAT SAT (4sk1)	Axial FLAIR FAT SAT (3sk1)	
	Coronal T2 TSE (4sk1)	Coronal T2 TSE (3sk1)	
		+	
			1

Cervical With			
	Coronal T1 TSE (3sk 0.5)	Coronal T1 TSE (3sk 0.5)	FOV= skull base through upper T-spine on sagittal
	Sagittal T1 TSE (3sk0) Sagittal T2 TSE (3sk0)	Sagittal T1 TSE (3sk0) Sagittal T2 TSE (3sk0)	FOV=12cm on Axials: FOV = 20cm on Sagittal Scan from C2 through T1
	Sagittal 12 ISE (38k0) Sagittal STIR (38k0)	Sagittal 12 1SE (3sk0) Sagittal STIR (3sh0)	Scan from C2 through 11
	Sagittal T2 oblique (2sk0)	Sagittal T2 oblique (2sk0)	Sagittal oblique T2 = Align perpendicular to the neural foramen
	Axial T2 TSE (2sk0)	Axial T2 TSE (2sk0)	Sagntar orique 12 = Arigi perpendicular to the neural totalien
	Axial GRE (3sk0)	Axial GRE (3sk0)	
	Sagittal DWI (3sk0.3)	Sagittal DWI (3sk0.3)	
	Precontrast Axial T1 TSE (3sk0)	Precontrast Axial T1 FLAIR (3sk0.3)	
	Axial C+ T1 fat sat (3sk0)	Axial C+ T1 fat sat (3sk0)	
	Sagittal C+T1 TSE (3sk0)	Sagittal C+ T1 FLAIR (3sk0)	
·			
Cervical Without			
	Coronal T1 TSE (3sk 0.5)	Coronal T1 TSE (3sk 0.5)	Could do foraminal oblique reformats off axial T2
	Sagittal T1 TSE (3sk0)	Sagittal T1 FLAIR (3sk0)	FOV=12cm on Axials: FOV = 20cm on Sagittal
	Sagittal T2 TSE (3sk0)	Sagittal T2 TSE(3sk0)	Axial images should be from C2 through T1
	Sagittal STIR (3sk0)	Sagittal STIR (3sk0)	
	Sagittal T2 oblique (2sk0)	Sagittal T2 oblique (2sk0)	Sagittal oblique T2 = Align perpendicular to the neural foramen
	Axial T2 TSE (2sk0)	Axial T2 TSE (2sk0)	
	Axial GRE (3sk0)	Axial GRE (3sk0)	
	Sagittal DWI (3sk0.3)	Sagittal DWI (3sk0.3)	
F			
Face	C T1 (2/1)	CAME	POV. M. G. Canad Can
	Cor T1 (3/1)	SAME	FOV= 16 for Cor and Sag
	Cor STIR (3/1)		FOV= 14 Axial
	Ax T1 (3/1)		
	Ax T2 Fat Sat (3/1)		
	Sag T1 SE (3/1) Ax DWI (3/1)		
	DA DWI (3/1)		
IAC			
	Preferably with Brain WITH	SAME	FOV= 15-18cm
	Posterior fossa :	571.71.2	101-15 1001
	Axial T1 (2sk0)		Scan from tip of the dorsum Sella through C1 on axials
	Axial FIESTA 1mm		
	Coronal HASTE Diffusion		
	Coronal reformats		Scan from posterior skull through orbital apex on coronals
	Sagittal reformats along IAC		
	Axial T2 (2sk0)		
	Axial C+ T1 fat sat (2sk0)		
	Coronal C+ T1 fat sat (2sk0)		
Kyphoplasty			
	Localizer including cervical and upper thoracic spine	Localizer including cervical and upper thoracic spine	
	Sagittal T1 TSE-thoracic (3sk0.5)	Sagittal T1 FLAIR- thoracic (3sk0.5)	
	Sagittal T2 TSE- thoracic (3sk0.5)	Sagittal T2 TSE- thoracic (3sk0.5)	
	Sagittal T1 TSE -Lumbar (3sk0.5)	Sagittal T1 FLAIR -Lumbar (3sk0.5)	
	Sagittal T2 TSE-Lumbar (3sk0.5)	Sagittal T2 TSE-Lumbar (3sk0.5)	
	Sagittal T2 TSE-Lumbar (3sk0.5) Sagittal STIR -thoracolumbar (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)	
	Sagittal T2 TSE-Lumbar (3sk0.5)		
	Sagittal T2 TSE-Lumbar (3sk0.5) Sagittal STIR -thoracolumbar (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)	
Lumbar With	Sagittal T2 TSE-Lumbar (3sk0.5) Sagittal STIR -thoracolumbar (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)	
Lumbar With	Sagittal T2 TSE-Lumbar (3sk0.5) Sagittal STIR -thoracolumbar (3sk0.5) Coronal T1 TSE- thoracolumbar (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)  Coronal T1 TSE- thoracolumbar (3sk0.5)	No fat saturation if excessive artifact from metal hardware
Lumbar With	Sagittal T2 TSE-Lumbar (3sk0.5) Sagittal STR -thoracolumbar (3sk0.5) Coronal T1 TSE-thoracolumbar (3sk0.5)  Sagittal T1 TSE (3sk0.5)	Sagittal TTR-thoracolumbar (3sk0.5)  Coronal T1 TSE-thoracolumbar (3sk0.5)  Sagittal T1 TSE (3sk0.5)	No fat saturation if excessive artifact from metal hardware FOV: 15cm Axials
Lumbar With	Sagittal T2 TSE-Lumbar (3sk0.5) Sagittal STIR -thoracolumbar (3sk0.5) Coronal T1 TSE-thoracolumbar (3sk0.5)  Sagittal T1 TSE (3sk0.5) Sagittal T1 TSE (3sk0.5) Sagittal T2 TSE (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)  Coronal T1 TSE-thoracolumbar (3sk0.5)  Sagittal T1 TSE (3sk0.5)  Sagittal T1 TSE (3sk0.5)  Sagittal T2 TSE (3sk0.5)	No fat saturation if excessive artifact from metal hardware FOV: 15cm Axials
Lumbar With	Sagittal T2 TSE-Lumbar (3sk0.5) Sagittal STIR -thoracolumbar (3sk0.5) Coronal T1 TSE-thoracolumbar (3sk0.5)  Sagittal T1 TSE (3sk0.5) Sagittal T2 TSE (3sk0.5) Sagittal STIR (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)  Coronal T1 TSE- thoracolumbar (3sk0.5)  Sagittal T1 TSE (3sk0.5)  Sagittal T2 TSE (3sk0.5)  Sagittal STIR (3sk0.5)	
Lumbar With	Sagittal T2 TSE-Lumbar (3sk0.5) Sagittal STIR -thoracolumbar (3sk0.5) Coronal T1 TSE-thoracolumbar (3sk0.5)  Sagittal T1 TSE (3sk0.5) Sagittal T1 TSE (3sk0.5) Sagittal T2 TSE (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)  Coronal T1 TSE-thoracolumbar (3sk0.5)  Sagittal T1 TSE (3sk0.5)  Sagittal T1 TSE (3sk0.5)  Sagittal T2 TSE (3sk0.5)	
Lumbar With	Sagittal T2 TSE-Lumbar (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)  Coronal T1 TSE-thoracolumbar (3sk0.5)  Sagittal T1 TSE (3sk0.5)  Sagittal T2 TSE (3sk0.5)  Sagittal STIR (3sk0.5)  Axial T2 TSE (4sk1)	
Lumbar With	Sagittal T2 TSE-Lumbar (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)  Coronal T1 TSE- thoracolumbar (3sk0.5)  Sagittal T1 TSE (3sk0.5)  Sagittal T2 TSE (3sk0.5)  Sagittal STIR (3sk0.5)  Axial T2 TSE (4sk1)  Axial T1 TSE (4sk1)	
Lumbar With	Sagittal T2 TSE-Lumbar (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)	
Lumbar With	Sagittal T2 TSE-Lumbar (3sk0.5)  Sagittal STIR -thoracolumbar (3sk0.5)  Coronal T1 TSE-thoracolumbar (3sk0.5)  Sagittal T1 TSE (3sk0.5)  Sagittal T2 TSE (3sk0.5)  Sagittal T2 TSE (3sk0.5)  Sagittal STIR (3sk0.5)  Axial T2 TSE (4sk1)  Axial T1 TSE (4sk1)  Coronal T1 TSE (3sk0.5)  Sagittal DWI (3v0.5)	Sagittal STIR -thoracolumbar (3sk0.5)  Coronal T1 TSE -thoracolumbar (3sk0.5)  Sagittal T1 TSE (3sk0.5)  Sagittal T2 TSE (3sk0.5)  Sagittal STIR (3sk0.5)  Axial T2 TSE (4sk1)  Axial T1 TSE (4sk1)  Coronal T1 TSE (4sk1)  Sagittal DWI (30.5)	
Lumbar With	Sagittal T2 TSE-Lumbar (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)	
Lumbar With	Sagittal T2 TSE-Lumbar (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)	
Lumbar With	Sagittal T2 TSE-Lumbar (3sk0.5)  Sagittal STIR -thoracolumbar (3sk0.5)  Coronal T1 TSE-thoracolumbar (3sk0.5)  Sagittal T1 TSE (3sk0.5)  Sagittal T2 TSE (3sk0.5)  Sagittal T2 TSE (3sk0.5)  Sagittal STIR (3sk0.5)  Axial T2 TSE (4sk1)  Axial T1 TSE (4sk1)  Coronal T1 TSE (3sk0.5)  Sagittal DWI (3v0.5)  Axial C+T1 fat sat (4sk1)  Sagittal C+T1 TSE (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)  Coronal T1 TSE -thoracolumbar (3sk0.5)  Sagittal T1 TSE (3sk0.5)  Sagittal T2 TSE (3sk0.5)  Sagittal STIR (3sk0.5)  Axial T2 TSE (4sk1)  Axial T2 TSE (4sk1)  Axial T1 TSE (4sk1)  Coronal T1 TSE (3sk0.5)  Sagittal DWI (3/0.5)  Axial C+T1 fat sat (3sk0.5)  Sagittal C+T1 FLAIR (3sk0.5)	FOV: 15cm Axials
	Sagittal T2 TSE-Lumbar (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)	FOV: 15cm Axials  Axial Images from L1-S1
	Sagittal T2 TSE-Lumbar (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)	FOV: 15cm Axials
	Sagittal T2 TSE-Lumbar (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)	FOV: 15cm Axials  Axial Images from L1-S1
	Sagittal T2 TSE (4sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)	FOV: 15cm Axials  Axial Images from L1-S1
	Sagittal T2 TSE-Lumbar (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)  Coronal T1 TSE -thoracolumbar (3sk0.5)  Sagittal T1 TSE (3sk0.5)  Sagittal T2 TSE (3sk0.5)  Sagittal T3TR (3sk0.5)  Axial T2 TSE (4sk1)  Axial T1 TSE (4sk1)  Coronal T1 TSE (4sk1)  Coronal T1 TSE (3sk0.5)  Sagittal C+T1 fat sat (3sk0.5)  Sagittal C+T1 FLAIR (3sk0.5)  Sagittal T2 TSE (3sk0.5)  Sagittal T2 TSE (3sk0.5)  Sagittal T3 TSE (3sk0.5)  Sagittal T3 TSE (3sk0.5)  Sagittal T3 TSE (3sk0.5)  Axial T2 TSE (3sk0.5)  Axial T2 TSE (3sk0.5)  Axial T3 TSE (3sk0.5)  Axial T3 TSE (3sk0.5)  Axial T3 TSE (3sk0.5)	FOV: 15cm Axials  Axial Images from L1-S1
	Sagittal T2 TSE-Lumbar (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)	FOV: 15cm Axials  Axial Images from L1-S1
	Sagittal T2 TSE-Lumbar (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)  Coronal T1 TSE -thoracolumbar (3sk0.5)  Sagittal T1 TSE (3sk0.5)  Sagittal T2 TSE (3sk0.5)  Sagittal T3TR (3sk0.5)  Axial T2 TSE (4sk1)  Axial T1 TSE (4sk1)  Coronal T1 TSE (4sk1)  Coronal T1 TSE (3sk0.5)  Sagittal C+T1 fat sat (3sk0.5)  Sagittal C+T1 FLAIR (3sk0.5)  Sagittal T2 TSE (3sk0.5)  Sagittal T2 TSE (3sk0.5)  Sagittal T3 TSE (3sk0.5)  Sagittal T3 TSE (3sk0.5)  Sagittal T3 TSE (3sk0.5)  Axial T2 TSE (3sk0.5)  Axial T2 TSE (3sk0.5)  Axial T3 TSE (3sk0.5)  Axial T3 TSE (3sk0.5)  Axial T3 TSE (3sk0.5)	FOV: 15cm Axials  Axial Images from L1-S1
	Sagittal T2 TSE-Lumbar (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)	FOV: 15cm Axials  Axial Images from L1-S1
Lumbar Without	Sagittal T2 TSE-Lumbar (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)	FOV: 15cm Axials  Axial Images from L1-S1
	Sagittal T2 TSE-Lumbar (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)	FOV: 15cm Axials  Axial Images from L1-S1  FOV=15cm Axials
Lumbar Without	Sagittal T2 TSE-Lumbar (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)	FOV: 15cm Axials  Axial Images from L1-S1  FOV=15cm Axials  FOV = 25 cm
Lumbar Without	Sagittal T2 TSE-Lumbar (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)	FOV: 15cm Axials  Axial Images from L1-S1  FOV=15cm Axials  FOV = 25 cm  Planes should be relative to long axis of the sacrum
Lumbar Without	Sagittal T2 TSE-Lumbar (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)  Coronal T1 TSE -thoracolumbar (3sk0.5)  Sagittal T1 TSE (3sk0.5)  Sagittal T2 TSE (3sk0.5)  Sagittal T3E (3sk0.5)  Axial T2 TSE (4sk1)  Axial T1 TSE (4sk1)  Axial T1 TSE (4sk1)  Coronal T1 TSE (3sk0.5)  Sagittal DWI (30.5)  Axial C+T1 fat sat (3sk0.5)  Sagittal C+T1 fat sat (3sk0.5)  Sagittal T2 TSE (3sk0.5)  Sagittal T2 TSE (3sk0.5)  Sagittal T1 TSE (3sk0.5)  Axial T1 TSE (3sk0.5)  Axial T1 TSE (3sk0.5)  Axial T1 TSE (3sk0.5)  Obl Axial T1 TSE (3sk0.5)  Obl Axial T1 TSE (3sk1.5)  Obl Axial T1 TSE (3sk1.1)  Obl Axial T1 TSE (3sk1.1)  Obl Coronal T1 TSE (3sk1.1)	FOV: 15cm Axials  Axial Images from L1-S1  FOV=15cm Axials  FOV = 25 cm
Lumbar Without	Sagittal T2 TSE-Lumbar (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)	FOV: 15cm Axials  Axial Images from L1-S1  FOV=15cm Axials  FOV = 25 cm  Planes should be relative to long axis of the sacrum
Lumbar Without	Sagittal T2 TSE-Lumbar (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)	FOV: 15cm Axials  Axial Images from L1-S1  FOV=15cm Axials  FOV = 25 cm  Planes should be relative to long axis of the sacrum
Lumbar Without	Sagittal T2 TSE-Lumbar (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)	FOV: 15cm Axials  Axial Images from L1-S1  FOV=15cm Axials  FOV = 25 cm  Planes should be relative to long axis of the sacrum
Lumbar Without	Sagittal T2 TSE-Lumbar (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)	FOV: 15cm Axials  Axial Images from L1-S1  FOV=15cm Axials  FOV = 25 cm  Planes should be relative to long axis of the sacrum
Lumbar Without	Sagittal T2 TSE-Lumbar (3sk0.5)	Sagittal STIR -thoracolumbar (3sk0.5)	FOV: 15cm Axials  Axial Images from L1-S1  FOV=15cm Axials  FOV = 25 cm  Planes should be relative to long axis of the sacrum

MR Perfusion	D 11 2 11 10 C1		TO COLOR WITH MC COLOR WARREN	
	Power injection bolus before C+ images in conjunction with Brain Tumor WITH		If performing Brain Tumor WITH or MS, spectroscopy, offer MR Perfusion  Inject half the contrast prior to obtainin the DSC perfusion EPI sequence	
	Standard color reformats		After perfusion, inject remaining contrast to obtain the standard post contrast	
	Statement Color Personals		Bolus injection 4 mL/s	
MR Spectroscopy				
	Axial T2 TSE whole brain for localizer		MR Spectroscopy should only be scheduled/	
	Single Voxel  Multivoxel- shim to borders of ROI		Performed with Neuro Rad in house -plan both  Single and multi voxels with Neuro Rad	
	Multivoxet- shift to borders of ROI		Selection of multi voxel send to PACS with Neuro Rad	
			Occurrence of many total state of FLED man reado flad	
MRA Brain				
	3D TOF	SAME		
	COW reformats			
	Anterior circulation reformats			
	Posterior circulation reformats  Axial, sagittal, and coronal MIPs			
	Axiai, sagittai, and colonal will s			
MRA Carotid With				
	Survey	SAME	Contrast MRA should be performed if ordered	
	Auto-trigger		Also perform if MRI Brain WITH is ordered in	
	Arterial Venous		Conjunction with MRA neck (in addition to TOF)	
	Arterial and venous MIP reconstructions			
	Arterial right and left carotid and vertebral reconstructions			
MRV Carotid Without	AD MOD	an man and a second		
	2D TOF  Picht corotid, left corotid, and vertebral reformate	3D TOF multi-slab with recons	Cover aortic arch through basilar on axial images	
	Right carotid, left carotid, and vertebral reformats  If dissection possible:	Axial T1 fat sat (4sk0.5)		
	Axial T1 fat sat (4sk 0.5)			
MRV with Contrast				
	Phase contrast MRV (VENC 10-15)	SAME		
	2D TOF Axial and Coronal MPRAGE			
	MPRAGE			
MS Brain				
	Sagittal T1 TSE (4sk1)	Sagittal T1 FLAIR (3sk1)	Remove eADC from all protocols, should only do ADC	
	Sagittal FLAIR (4sk1)	Sagittal T2 FLAIR (3sk1)	Inject contrast, followed immediately by Axial T2	
	Axial T1 TSE (4sk1)	Axial T1 FLAIR (3sk1)	Inject contrast , followed immediately by Axial T2  Axial and coronal contrast enhanced T1s to follow T2 to allow contrast circulation time	
	Axial T1 TSE (4sk1) Axial T2 GRE (4sk1)	Axial T1 FLAIR (3sk1) SWI (3sk1) with MIPs	Axial and coronal contrast enhanced T1s to follow T2 to allow contrast circulation time	
	Axial T1 TSE (4sk1)  Axial T2 GRE (4sk1)  Axial DWI/ADC (3 Direction if possible ), reconstruct at 5sk0	Axial T1 FLAIR (3sk1) SWI (3sk1) with MIPs Resolve or 6-Direction DWI/ADC, reconstruct at 4sk0		
	Axial T1 TSE (4sk1) Axial T2 GRE (4sk1) Axial DWIADC (3 Direction if possible ), reconstruct at 5sk0 Axial FLAIR FAT SAT (4sk1)	Axial T1 FLAIR (3sk1) SWI (3sk1) with MIPs Resolve or 6-Direction DW/ADC, reconstruct at 4sk0 Axial FLAIR FAT SAT	Axial and coronal contrast enhanced T1s to follow T2 to allow contrast circulation time	
	Axial T1 TSE (4sk1) Axial T2 GRE (4sk1) Axial DW/ADC (3 Direction if possible ), reconstruct at 5sk0 Axial FLAIR FAT SAT (4sk1) Axial C+ T2 TSE (4sk1) Axial C+ T1 TSE (4sk1)	Axial T1 FLAIR (3sk1) SWI (3sk1) with MPs Resolve or 6-Direction DWI/ADC, reconstruct at 4sk0 Axial FLAIR FAT SAT Axial C+ T2 TSE (3sk1) Axial C+ T1 FLAIR (3sk1)	Axial and coronal contrast enhanced T1s to follow T2 to allow contrast circulation time  Scan through whole brain (skull to skull) on sagittal images	
	Axial T1 TSE (4sk1) Axial T2 GRE (4sk1) Axial DWIADC (3 Direction if possible ), reconstruct at 5sk0 Axial DRIAR FAT SAT (4sk1) Axial C+ T2 TSE (4sk1)	Axial T1 FLAIR (3sk1) SWI (3sk1) with MIPs Resolve or 6-Direction DWI/ADC, reconstruct at 4sk0 Axial FLAIR FAT SAT Axial C+ T2 TSE (3sk1)	Axial and coronal contrast enhanced T1s to follow T2 to allow contrast circulation time  Scan through whole brain (skull to skull) on sagittal images	
	Axial T1 TSE (4sk1) Axial T2 GRE (4sk1) Axial DW/ADC (3 Direction if possible ), reconstruct at 5sk0 Axial FLAIR FAT SAT (4sk1) Axial C+ T2 TSE (4sk1) Axial C+ T1 TSE (4sk1)	Axial T1 FLAIR (3sk1) SWI (3sk1) with MPs Resolve or 6-Direction DWI/ADC, reconstruct at 4sk0 Axial FLAIR FAT SAT Axial C+ T2 TSE (3sk1) Axial C+ T1 FLAIR (3sk1)	Axial and coronal contrast enhanced T1s to follow T2 to allow contrast circulation time  Scan through whole brain (skull to skull) on sagittal images	
MS Brain (Dr. Hermann - JWM)	Axial T1 TSE (4sk1) Axial T2 GRE (4sk1) Axial DW/ADC (3 Direction if possible ), reconstruct at 5sk0 Axial FLAIR FAT SAT (4sk1) Axial C+ T2 TSE (4sk1) Axial C+ T1 TSE (4sk1)	Axial T1 FLAIR (3sk1) SWI (3sk1) with MPs Resolve or 6-Direction DWI/ADC, reconstruct at 4sk0 Axial FLAIR FAT SAT Axial C+ T2 TSE (3sk1) Axial C+ T1 FLAIR (3sk1)	Axial and coronal contrast enhanced T1s to follow T2 to allow contrast circulation time  Scan through whole brain (skull to skull) on sagittal images	
MS Brain (Dr. Hermann - JWM)	Axial T1 TSE (4sk1) Axial T2 GRE (4sk1) Axial DW/ADC (3 Direction if possible ), reconstruct at 5sk0 Axial FLAIR FAT SAT (4sk1) Axial C+ T2 TSE (4sk1) Axial C+ T1 TSE (4sk1)	Axial T1 FLAIR (3sk1) SWI (3sk1) with MPs Resolve or 6-Direction DWI/ADC, reconstruct at 4sk0 Axial FLAIR FAT SAT Axial C+ T2 TSE (3sk1) Axial C+ T1 FLAIR (3sk1)	Axial and coronal contrast enhanced T1s to follow T2 to allow contrast circulation time  Scan through whole brain (skull to skull) on sagittal images	
MS Brain (Dr. Hermann - JWM)	Axial T1 TSE (4sk1) Axial T2 GRE (4sk1) Axial DW/ADC (3 Direction if possible ), reconstruct at 5sk0 Axial FLAIR FAT SAT (4sk1) Axial C+ T2 TSE (4sk1) Axial C+ T1 TSE (4sk1) Coronal C+ TISE (4sk1)  Sagittal volumetric T1 inversion recovery with 3mm reconstructions (3 plane)	Axial T1 FLAIR (3sk1) SWI (3sk1) with MPs Resolve or 6-Direction DWI/ADC, reconstruct at 4sk0 Axial FLAIR FAT SAT Axial C+ T2 TSE (3sk1) Axial C+ T1 FLAIR (3sk1) Coronal C+ T1 FLAIR (3sk1) Precontrast Sagittal T1 FLAIR, T2, T2 T2 FLAIR with 3mm reconstructions in 3 planes	Axial and coronal contrast enhanced T1s to follow T2 to allow contrast circulation time  Scan through whole brain (skull to skull) on sagittal images  FOV=23cm  Important to do as close to CMSC protocol as possible , this has been specifically requested by JMW Neurology (Dr. Hermann).	
MS Brain (Dr. Hermann - JWM)	Axial T1 TSE (4sk1) Axial T2 GRE (4sk1) Axial DWIADC (3 Direction if possible ), reconstruct at 5sk0 Axial FLARE FAT SAT (4sk1) Axial FLARE FAT SAT (4sk1) Axial C+ T1 TSE (4sk1) Axial C+ T1 TSE (4sk1) Coronal C+ TSE (4sk1)  Sagittal volumetric T1 inversion recovery with 3mm reconstructions (3 plane ) #I possible , Sagittal volumetric 3D T2 FLAIR with 3mm	Axial T1 FLAIR (3sk1) SWI (3sk1) with MIPs Resolve or 6-Direction DWI/ADC, reconstruct at 4sk0 Axial FLAIR FAT SAT Axial C+ T2 TSE (3sk1) Axial C+ T1 FLAIR (3sk1) Coronal C+ T1 FLAIR (3sk1) Precontrast Sagittal T1 FLAIR, T2, T2 T2 FLAIR with 3mm reconstructions in 3 planes DWI ADC: Resolve or 6-direction (4sk0)	Axial and coronal contrast enhanced T1s to follow T2 to allow contrast circulation time  Scan through whole brain (skull to skull) on sagittal images  FOV=23cm  Important to do as close to CMSC protocol as possible , this has been specifically requested by JMW Neurology (Dr. Hermann). It may not be possible to do this protocol on the open magnets (specifically the 0.7)	
MS Brain (Dr. Hermann - JWM)	Axial T1 TSE (4sk1) Axial T2 GRE (4sk1) Axial DWIADC (3 Direction if possible ), reconstruct at 5sk0 Axial FLAIR FAT SAT (4sk1) Axial C+ T2 TSE (4sk1) Axial C+ T1 TSE (4sk1) Coronal C+ TSE (4sk1)  Sagittal volumetric T1 inversion recovery with 3mm reconstructions (3 plane )  *# possible _Sagittal volumetric 3D T2 FLAIR with 3mm reconstructions (3 plane )	Axial T1 FLAIR (3sk1) SWI (3sk1) with MIPs Resolve or 6-Direction DWI/ADC, reconstruct at 4sk0 Axial FLAIR FAT SAT Axial C+ T2 TSE (3sk1) Axial C+ T1 FLAIR (3sk1) Coronal C+ T1 FLAIR (3sk1)  Precontrast Sagittal T1 FLAIR, T2, T2 T2 FLAIR with 3mm reconstructions in 3 planes DWI ADC- Resolve or 6- direction (4sk0) SWI	Axial and coronal contrast enhanced T1s to follow T2 to allow contrast circulation time  Scan through whole brain (skull to skull) on sagittal images  FOV=23cm  Important to do as close to CMSC protocol as possible, this has been specifically requested by JMW Neurology (Dr. Hermann), It may not be possible to do this protocol on the open magnets (specifically the 0.7) (specifically the 0.7) or the older 1.5	
MS Brain (Dr. Hermann - JWM)	Axial T1 TSE (4sk1) Axial T2 GRE (4sk1) Axial DW/ADC (3 Direction if possible ), reconstruct at 5sk0 Axial FLAIR FAT SAT (4sk1) Axial C+ T2 TSE (4sk1) Axial C+ T1 TSE (4sk1) Coronal C+ TSE (4sk1)  Sagittal volumetric T1 inversion recovery with 3mm reconstructions (3 plane )  *If possible , Sagittal volumetric 3D T2 FLAIR with 3mm reconstructions (3 plane )	Axial T1 FLAIR (3sk1) SW1 (3sk1) with MPs Resolve or 6-Direction DW/ADC, reconstruct at 4sk0 Axial FLAIR FAT SAT Axial C+ T2 TSE (3sk1) Axial C+ T1 FLAIR (3sk1) Coronal C+ T1 FLAIR (3sk1)  Precontrast Sagittal T1 FLAIR, T2, T2 T2 FLAIR with 3mm reconstructions in 3 planes DW/ ADC- Resolve or 6- direction (4sk0) SW1 Post-contrast Sagittal T1 non-IR with 3mm reconstructions in 3 planes	Axial and coronal contrast enhanced T1s to follow T2 to allow contrast circulation time  Scan through whole brain (skull to skull) on sagittal images  FOV=23cm  Important to do as close to CMSC protocol as possible , this has been specifically requested by JMW Neurology (Dr. Hermann). It may not be possible to do this protocol on the open magnets (specifically the 0.7)	
MS Brain (Dr. Hermann - JWM)	Axial T1 TSE (4sk1) Axial T2 GRE (4sk1) Axial DW/ADC (3 Direction if possible ), reconstruct at 5sk0 Axial FLAIR FAT SAT (4sk1) Axial FLAIR FAT SAT (4sk1) Axial C+ T2 TSE (4sk1) Axial C+ T1 TSE (4sk1) Coronal C+ TSE (4sk1)  Sagittal volumetric T1 inversion recovery with 3mm reconstructions (3 plane) *If possible , Sagittal volumetric 3D T2 FLAIR with 3mm reconstructions (3 plane) *If possible volumetric 3D T2 with 3mm reconstructions (3 plane)	Axial T1 FLAIR (3sk1) SWI (3sk1) with MIPs Resolve or 6-Direction DWI/ADC, reconstruct at 4sk0 Axial FLAIR FAT SAT Axial C+ T2 TSE (3sk1) Axial C+ T1 FLAIR (3sk1) Coronal C+ T1 FLAIR (3sk1)  Precontrast Sagittal T1 FLAIR, T2, T2 T2 FLAIR with 3mm reconstructions in 3 planes DWI ADC- Resolve or 6- direction (4sk0) SWI	Axial and coronal contrast enhanced T1s to follow T2 to allow contrast circulation time  Scan through whole brain (skull to skull) on sagittal images  FOV=23cm  Important to do as close to CMSC protocol as possible, this has been specifically requested by JMW Neurology (Dr. Hermann), It may not be possible to do this protocol on the open magnets (specifically the 0.7) (specifically the 0.7) or the older 1.5	
MS Brain (Dr. Hermann - JWM)	Axial T1 TSE (4sk1) Axial T2 GRE (4sk1) Axial DW/ADC (3 Direction if possible ), reconstruct at 5sk0 Axial FLAIR FAT SAT (4sk1) Axial C+ T2 TSE (4sk1) Axial C+ T1 TSE (4sk1) Coronal C+ TSE (4sk1)  Sagittal volumetric T1 inversion recovery with 3mm reconstructions (3 plane )  *If possible , Sagittal volumetric 3D T2 FLAIR with 3mm reconstructions (3 plane )	Axial T1 FLAIR (3sk1) SW1 (3sk1) with MPs Resolve or 6-Direction DW/ADC, reconstruct at 4sk0 Axial FLAIR FAT SAT Axial C+ T2 TSE (3sk1) Axial C+ T1 FLAIR (3sk1) Coronal C+ T1 FLAIR (3sk1)  Precontrast Sagittal T1 FLAIR, T2, T2 T2 FLAIR with 3mm reconstructions in 3 planes DW/ ADC- Resolve or 6- direction (4sk0) SW1 Post-contrast Sagittal T1 non-IR with 3mm reconstructions in 3 planes	Axial and coronal contrast enhanced T1s to follow T2 to allow contrast circulation time  Scan through whole brain (skull to skull) on sagittal images  EOV=23cm  Important to do as close to CMSC protocol as possible , this has been specifically requested by JMW Neurology (Dr. Hermann). It may not be possible to do this protocol on the open magnets (specifically the 0.7) of the older 1.5  This section imaging is required , however .	
MS Brain (Dr. Hermann - JWM)	Axial T1 TSE (4sk1)  Axial T2 GRE (4sk1)  Axial DW/ADC (3 Direction if possible ), reconstruct at 5sk0  Axial FLAIR FAT SAT (4sk1)  Axial C+17 TSE (4sk1)  Axial C+7 TSE (4sk1)  Coronal C+TSE (4sk1)  Sagittal volumetric T1 inversion recovery with 3mm  reconstructions (3 plane)  *If possible, Sagittal volumetric 3D T2 FLAIR with 3mm  reconstructions (3 plane)  *If possible volumetric 3D T2 with 3mm  reconstructions (3 plane)  *If possible volumetric 3D T2 with 3mm  reconstructions (3 plane)  *If volumetric imaging not possible , axial T2 and axial and  Sagittal and FLAIR (3sk0)  Axial T1 spin echo (3sk0)	Axial T1 FLAIR (3sk1) SW1 (3sk1) with MPs Resolve or 6-Direction DW/ADC, reconstruct at 4sk0 Axial FLAIR FAT SAT Axial C+ T2 TSE (3sk1) Axial C+ T1 FLAIR (3sk1) Coronal C+ T1 FLAIR (3sk1)  Precontrast Sagittal T1 FLAIR, T2, T2 T2 FLAIR with 3mm reconstructions in 3 planes DW/ ADC- Resolve or 6- direction (4sk0) SW1 Post-contrast Sagittal T1 non-IR with 3mm reconstructions in 3 planes	Axial and coronal contrast enhanced T1s to follow T2 to allow contrast circulation time  Scan through whole brain (skull to skull) on sagittal images  EOV=23cm  Important to do as close to CMSC protocol as possible , this has been specifically requested by JMW Neurology (Dr. Hermann). It may not be possible to do this protocol on the open magnets (specifically the 0.7) of the older 1.5  This section imaging is required , however .	
MS Brain (Dr. Hermann - JWM)	Axial T1 TSE (4sk1)  Axial T2 GRE (4sk1)  Axial DW/ADC (3 Direction if possible ), reconstruct at 5sk0  Axial FLARE FAT SAT (4sk1)  Axial C+ T2 TSE (4sk1)  Axial C+ T1 TSE (4sk1)  Coronal C+ TSE (4sk1)  Sagittal volumetric T1 inversion recovery with 3mm  reconstructions (3 plane)  *If possible , Sagittal volumetric 3D T2 FLAIR with 3mm  reconstructions (3 plane)  *If possible volumetric 3D T2 with 3mm  reconstructions (3 plane)  *If possible volumetric 3D T2 with 3mm  reconstructions (3 plane)  *If possible volumetric 3D T2 with 3mm  reconstructions (3 plane)  *If volumetric imaging not possible , axial T2 and axial and  Sagittal and FLAIR (3sk0)  Axial T1 spin echo (3sk0)  Axial GRE (3sk))	Axial T1 FLAIR (3sk1) SW1 (3sk1) with MPs Resolve or 6-Direction DW/ADC, reconstruct at 4sk0 Axial FLAIR FAT SAT Axial C+ T2 TSE (3sk1) Axial C+ T1 FLAIR (3sk1) Coronal C+ T1 FLAIR (3sk1)  Precontrast Sagittal T1 FLAIR, T2, T2 T2 FLAIR with 3mm reconstructions in 3 planes DW/ ADC- Resolve or 6- direction (4sk0) SW1 Post-contrast Sagittal T1 non-IR with 3mm reconstructions in 3 planes	Axial and coronal contrast enhanced T1s to follow T2 to allow contrast circulation time  Scan through whole brain (skull to skull) on sagittal images  FOV=23cm  FOV=23cm  Important to do as close to CMSC protocol as possible . this has been specifically requested by JMW Neurology (Dr. Hermann). It may not be possible to do this protocol on the open magnets (specifically the 0.7) (specifically the 0.7) or the older 1.5  This section imaging is required , however .  Label these studies / sequences in PACS as CMSC Protocol?	
MS Brain (Dr. Hermann - JWM)	Axial T1 TSE (4sk1) Axial T2 GRE (4sk1) Axial DW/ADC (3 Direction if possible ), reconstruct at 5sk0 Axial FLARE FAT SAT (4sk1) Axial FLARE FAT SAT (4sk1) Axial C+ T2 TSE (4sk1) Axial C+ T1 TSE (4sk1) Coronal C+ TSE (4sk1)  Sagittal volumetric T1 inversion recovery with 3mm reconstructions (3 plane)  *If possible , Agaittal volumetric 3D T2 FLAIR with 3mm reconstructions (3 plane)  *If possible volumetric 3D T2 with 3mm reconstructions (3 plane)  *If volumetric imaging not possible , axial T2 and axial and Sagittal and FLAIR (3sk0) Axial T1 spin echo (3sk0) Axial GRE (3sk)) DW/ADC (5skd)	Axial T1 FLAIR (3sk1) SW1 (3sk1) with MPs Resolve or 6-Direction DW/ADC, reconstruct at 4sk0 Axial FLAIR FAT SAT Axial C+ T2 TSE (3sk1) Axial C+ T1 FLAIR (3sk1) Coronal C+ T1 FLAIR (3sk1)  Precontrast Sagittal T1 FLAIR, T2, T2 T2 FLAIR with 3mm reconstructions in 3 planes DW/ ADC- Resolve or 6- direction (4sk0) SW1 Post-contrast Sagittal T1 non-IR with 3mm reconstructions in 3 planes	Axial and coronal contrast enhanced T1s to follow T2 to allow contrast circulation time  Scan through whole brain (skull to skull) on sagittal images  FOV=23cm  FOV=23cm  Important to do as close to CMSC protocol as possible . this has been specifically requested by JMW Neurology (Dr. Hermann). It may not be possible to do this protocol on the open magnets (specifically the 0.7) (specifically the 0.7) or the older 1.5  This section imaging is required , however .  Label these studies / sequences in PACS as CMSC Protocol?	
MS Brain (Dr. Hermann - JWM)	Axial T1 TSE (4sk1) Axial T2 GRE (4sk1) Axial DW/ADC (3 Direction if possible ), reconstruct at 5sk0 Axial FLARE FAT SAT (4sk1) Axial C+T2 TSE (4sk1) Axial C+T3 TSE (4sk1) Axial C+T1 TSE (4sk1) Coronal C+TSE (4sk1)  Sagittal volumetric T1 inversion recovery with 3mm reconstructions (3 plane)  *If possible , Sagittal volumetric 3D T2 FLAIR with 3mm reconstructions (3 plane)  *If possible volumetric 3D T2 with 3mm reconstructions (3 plane)  *If possible volumetric 3D T2 with 3mm reconstructions (3 plane)  *If volumetric imaging not possible , axial T2 and axial and Sagittal and FLAIR (3sk0) Axial T3 pin echo (3sk0) Axial GRE (3sk) DWIADC (5sk0) Sagittal volumetric T1 non-IR post-contrast with 3mm	Axial T1 FLAIR (3sk1) SW1 (3sk1) with MPs Resolve or 6-Direction DW/ADC, reconstruct at 4sk0 Axial FLAIR FAT SAT Axial C+ T2 TSE (3sk1) Axial C+ T1 FLAIR (3sk1) Coronal C+ T1 FLAIR (3sk1)  Precontrast Sagittal T1 FLAIR, T2, T2 T2 FLAIR with 3mm reconstructions in 3 planes DW/ ADC- Resolve or 6- direction (4sk0) SW1 Post-contrast Sagittal T1 non-IR with 3mm reconstructions in 3 planes	Axial and coronal contrast enhanced T1s to follow T2 to allow contrast circulation time  Scan through whole brain (skull to skull) on sagittal images  FOV=23cm  FOV=23cm  Important to do as close to CMSC protocol as possible . this has been specifically requested by JMW Neurology (Dr. Hermann). It may not be possible to do this protocol on the open magnets (specifically the 0.7) (specifically the 0.7) or the older 1.5  This section imaging is required , however .  Label these studies / sequences in PACS as CMSC Protocol?	
MS Brain (Dr. Hermann - JWM)	Axial T1 TSE (4sk1)  Axial T2 GRE (4sk1)  Axial DWIADC (3 Direction if possible ), reconstruct at 5sk0  Axial FLARE FAT SAT (4sk1)  Axial FLARE FAT SAT (4sk1)  Axial C+ T1 TSE (4sk1)  Axial C+ T1 TSE (4sk1)  Coronal C+ TSE (4sk1)  Sagittal volumetric T1 inversion recovery with 3mm  reconstructions (3 plane )  *If possible , Sagittal volumetric 3D T2 FLAIR with 3mm  reconstructions (3 plane )  *If possible volumetric 3D T2 with 3mm  reconstructions (3 plane )  *If volumetric imaging not possible , axial T2 and axial and  Sagittal and FLAIR (3sk0)  Axial T1 spin echo (3sk0)  Axial T3 spin echo (3sk0)  Axial T3 spin echo (3sk0)  Sagittal volumetric T1 non-IR post-contrast with 3mm  reconstructions (3 plane)	Axial T1 FLAIR (3sk1) SW1 (3sk1) with MPs Resolve or 6-Direction DW/ADC, reconstruct at 4sk0 Axial FLAIR FAT SAT Axial C+ T2 TSE (3sk1) Axial C+ T1 FLAIR (3sk1) Coronal C+ T1 FLAIR (3sk1)  Precontrast Sagittal T1 FLAIR, T2, T2 T2 FLAIR with 3mm reconstructions in 3 planes DW/ ADC- Resolve or 6- direction (4sk0) SW1 Post-contrast Sagittal T1 non-IR with 3mm reconstructions in 3 planes	Axial and coronal contrast enhanced T1s to follow T2 to allow contrast circulation time  Scan through whole brain (skull to skull) on sagittal images  FOV=23cm  FOV=23cm  Important to do as close to CMSC protocol as possible . this has been specifically requested by JMW Neurology (Dr. Hermann). It may not be possible to do this protocol on the open magnets (specifically the 0.7) (specifically the 0.7) or the older 1.5  This section imaging is required , however .  Label these studies / sequences in PACS as CMSC Protocol?	
MS Brain (Dr. Hermann - JWM)	Axial T1 TSE (4sk1) Axial T2 GRE (4sk1) Axial DW/ADC (3 Direction if possible ), reconstruct at 5sk0 Axial FLARE FAT SAT (4sk1) Axial C+T2 TSE (4sk1) Axial C+T3 TSE (4sk1) Axial C+T1 TSE (4sk1) Coronal C+TSE (4sk1)  Sagittal volumetric T1 inversion recovery with 3mm reconstructions (3 plane)  *If possible , Sagittal volumetric 3D T2 FLAIR with 3mm reconstructions (3 plane)  *If possible volumetric 3D T2 with 3mm reconstructions (3 plane)  *If possible volumetric 3D T2 with 3mm reconstructions (3 plane)  *If volumetric imaging not possible , axial T2 and axial and Sagittal and FLAIR (3sk0) Axial T3 pin echo (3sk0) Axial GRE (3sk) DWIADC (5sk0) Sagittal volumetric T1 non-IR post-contrast with 3mm	Axial T1 FLAIR (3sk1) SW1 (3sk1) with MPs Resolve or 6-Direction DW/ADC, reconstruct at 4sk0 Axial FLAIR FAT SAT Axial C+ T2 TSE (3sk1) Axial C+ T1 FLAIR (3sk1) Coronal C+ T1 FLAIR (3sk1)  Precontrast Sagittal T1 FLAIR, T2, T2 T2 FLAIR with 3mm reconstructions in 3 planes DW/ ADC- Resolve or 6- direction (4sk0) SW1 Post-contrast Sagittal T1 non-IR with 3mm reconstructions in 3 planes	Axial and coronal contrast enhanced T1s to follow T2 to allow contrast circulation time  Scan through whole brain (skull to skull) on sagittal images  FOV=23cm  FOV=23cm  Important to do as close to CMSC protocol as possible . this has been specifically requested by JMW Neurology (Dr. Hermann). It may not be possible to do this protocol on the open magnets (specifically the 0.7) (specifically the 0.7) or the older 1.5  This section imaging is required , however .  Label these studies / sequences in PACS as CMSC Protocol?	
MS Brain (Dr. Hermann - JWM)	Axial T1 TSE (4sk1) Axial T2 GRE (4sk1) Axial DW/ADC (3 Direction if possible ), reconstruct at 5sk0 Axial FLAIR FAT SAT (4sk1) Axial FLAIR FAT SAT (4sk1) Axial C+ T1 TSE (4sk1) Axial C+ T1 TSE (4sk1) Coronal C+ TSE (4sk1)  Sagittal volumetric T1 inversion recovery with 3mm reconstructions (3 plane)  *If possible , Sagittal volumetric 3D T2 FLAIR with 3mm reconstructions (3 plane)  *If possible volumetric 3D T2 with 3mm reconstructions (3 plane)  *If volumetric imaging not possible , axial T2 and axial and Sagittal and FLAIR (3sk0) Axial T1 spin echo (3sk0) Axial GRE (3sk) DW/ADC (3sk0) Sagittal volumetric T1 non-IR post-contrast with 3mm reconstructions (3 plane)	Axial T1 FLAIR (3sk1) SW1 (3sk1) with MPs Resolve or 6-Direction DW/ADC, reconstruct at 4sk0 Axial FLAIR FAT SAT Axial C+ T2 TSE (3sk1) Axial C+ T1 FLAIR (3sk1) Coronal C+ T1 FLAIR (3sk1)  Precontrast Sagittal T1 FLAIR, T2, T2 T2 FLAIR with 3mm reconstructions in 3 planes DW/ ADC- Resolve or 6- direction (4sk0) SW1 Post-contrast Sagittal T1 non-IR with 3mm reconstructions in 3 planes	Axial and coronal contrast enhanced T1s to follow T2 to allow contrast circulation time  Scan through whole brain (skull to skull) on sagittal images  FOV=23cm  FOV=23cm  Important to do as close to CMSC protocol as possible . this has been specifically requested by JMW Neurology (Dr. Hermann). It may not be possible to do this protocol on the open magnets (specifically the 0.7) (specifically the 0.7) or the older 1.5  This section imaging is required , however .  Label these studies / sequences in PACS as CMSC Protocol?	
	Axial T1 TSE (4sk1) Axial T2 GRE (4sk1) Axial DW/ADC (3 Direction if possible ), reconstruct at 5sk0 Axial FLAIR FAT SAT (4sk1) Axial FLAIR FAT SAT (4sk1) Axial C+ T1 TSE (4sk1) Axial C+ T1 TSE (4sk1) Coronal C+ TSE (4sk1)  Sagittal volumetric T1 inversion recovery with 3mm reconstructions (3 plane)  *If possible , Sagittal volumetric 3D T2 FLAIR with 3mm reconstructions (3 plane)  *If possible volumetric 3D T2 with 3mm reconstructions (3 plane)  *If volumetric imaging not possible , axial T2 and axial and Sagittal and FLAIR (3sk0) Axial T1 spin echo (3sk0) Axial GRE (3sk) DW/ADC (3sk0) Sagittal volumetric T1 non-IR post-contrast with 3mm reconstructions (3 plane)	Axial T1 FLAIR (3sk1) SW1 (3sk1) with MPs Resolve or 6-Direction DW/ADC, reconstruct at 4sk0 Axial FLAIR FAT SAT Axial C+ T2 TSE (3sk1) Axial C+ T1 FLAIR (3sk1) Coronal C+ T1 FLAIR (3sk1)  Precontrast Sagittal T1 FLAIR, T2, T2 T2 FLAIR with 3mm reconstructions in 3 planes DW/ ADC- Resolve or 6- direction (4sk0) SW1 Post-contrast Sagittal T1 non-IR with 3mm reconstructions in 3 planes	Axial and coronal contrast enhanced T1s to follow T2 to allow contrast circulation time  Scan through whole brain (skull to skull) on sagittal images  FOV=23cm  FOV=23cm  Important to do as close to CMSC protocol as possible . this has been specifically requested by JMW Neurology (Dr. Hermann). It may not be possible to do this protocol on the open magnets (specifically the 0.7) (specifically the 0.7) or the older 1.5  This section imaging is required , however .  Label these studies / sequences in PACS as CMSC Protocol?	
MS Brain (Dr. Hermann - JWM)  Neck With	Axial T1 TSE (4sk1)  Axial T2 GRE (4sk1)  Axial DWIADC (3 Direction if possible ), reconstruct at 5sk0  Axial FLARE FAT SAT (4sk1)  Axial FLARE FAT SAT (4sk1)  Axial C+ T1 TSE (4sk1)  Coronal C+ TSE (4sk1)  Sagittal volumetric T1 inversion recovery with 3mm  reconstructions (3 plane )  *If possible , Sagittal volumetric 3D T2 FLAIR with 3mm  reconstructions (3 plane )  *If possible volumetric 3D T2 vith 3mm  reconstructions (3 plane )  *If volumetric imaging not possible , axial T2 and axial and  Sagittal and FLAIR (3sk0)  Axial T1 spin echo (3sk0)  Axial T3 spin echo (3sk0)  Axial T3 spin echo (3sk0)  Sagittal volumetric T1 non-IR post-contrast with 3mm  reconstructions (3 plane)  Axial (C+T1 (3sk0)  Coronal C+T1 (3sk0)	Axial T1 FLAIR (3sk1) SWI (3sk1) with MIPs Resolve or 6-Direction DWI/ADC, reconstruct at 4sk0 Axial FLAIR FAT SAT Axial C+ T2 TSE (3sk1) Axial C+ T1 FLAIR (3sk1) Coronal C+ T1 FLAIR (3sk1)  Precontrast Sagittal T1 FLAIR, T2, T2 T2 FLAIR with 3mm reconstructions in 3 planes DWI/ADC- Resolve or 6- direction (4sk0) SWI Post-contrast Sagittal T1 non-IR with 3mm reconstructions in 3 planes Please image following 5 min delay to allow for contrast circulation	Axial and coronal contrast enhanced T1s to follow T2 to allow contrast circulation time  Scan through whole brain (skull to skull) on sagittal images  FOV=23cm  Important to do as close to CMSC protocol as possible , this has been specifically requested by JMW Neurology (Dr. Hermann). It may not be possible to do this protocol on the open magnets (specifically the 0.7) (specifically the 0.7) or the older 1.5  This section imaging is required , however .  Label these studies / sequences in PACS as CMSC Protocol?  FOV=23cm	
	Axial T1 TSE (4sk1)  Axial T2 GRE (4sk1)  Axial DW/ADC (3 Direction if possible ), reconstruct at 5sk0  Axial FLARE FAT SAT (4sk1)  Axial FLARE FAT SAT (4sk1)  Axial C+ T1 TSE (4sk1)  Axial C+ T1 TSE (4sk1)  Coronal C+ TSE (4sk1)  Sagittal volumetric T1 inversion recovery with 3mm  reconstructions (3 plane)  *If possible , Sagittal volumetric 3D T2 FLAIR with 3mm  reconstructions (3 plane)  *If possible volumetric 3D T2 with 3mm  reconstructions (3 plane)  *If volumetric imaging not possible , axial T2 and axial and  Sagittal and FLAIR (3sk0)  Axial T1 spin echo (3sk0)  Axial GRE (3sk)  DW/ADC (5sk0)  Sagittal volumetric T1 non-IR post-contrast with 3mm  reconstructions (3 plane)  Axial C+ T1 (3sk0)  Coronal C+ T1 (3sk0)	Axial T1 FLAIR (3sk1) SW1 (3sk1) with MPs Resolve or 6-Direction DW/ADC, reconstruct at 4sk0 Axial FLAIR FAT SAT Axial C+ T2 TSE (3sk1) Axial C+ T1 FLAIR (3sk1) Coronal C+ T1 FLAIR (3sk1)  Precontrast Sagittal T1 FLAIR, T2, T2 T2 FLAIR with 3mm reconstructions in 3 planes DW/ ADC- Resolve or 6- direction (4sk0) SW1 Post-contrast Sagittal T1 non-IR with 3mm reconstructions in 3 planes	Axial and coronal contrast enhanced T1s to follow T2 to allow contrast circulation time  Scan through whole brain (skull to skull) on sagittal images  EOV=23cm  Important to do as close to CMSC protocol as possible.  In this has been specifically requested by JMW Neurology (Dr. Hermann).  It may not be possible to do his protocol on the open magnets (specifically the 0.7)  (specifically the 0.7) or the older 1.5  This section imaging is required, however.  Label these studies / sequences in PACS as CMSC Protocol?  FOV=23cm	
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	Axial T1 TSE (4sk1)  Axial T2 GRE (4sk1)  Axial DW/ADC (3 Direction if possible ), reconstruct at 5sk0  Axial FLARE FAT SAT (4sk1)  Axial FLARE FAT SAT (4sk1)  Axial C+ T1 TSE (4sk1)  Axial C+ T1 TSE (4sk1)  Coronal C+ TSE (4sk1)  Sagittal volumetric T1 inversion recovery with 3mm  reconstructions (3 plane)  *If possible , Sagittal volumetric 3D T2 FLAIR with 3mm  reconstructions (3 plane)  *If possible volumetric 3D T2 with 3mm  reconstructions (3 plane)  *If volumetric imaging not possible , axial T2 and axial and  Sagittal and FLAIR (3sk0)  Axial T1 spin echo (3sk0)  Axial GRE (3sk)  DW/ADC (5sk0)  Sagittal volumetric T1 non-IR post-contrast with 3mm  reconstructions (3 plane)  Axial C+ T1 (3sk0)  Coronal C+ T1 (3sk0)	Axial T1 FLAIR (3sk1) SWI (3sk1) with MIPs Resolve or 6-Direction DWI/ADC, reconstruct at 4sk0 Axial FLAIR FAT SAT Axial C+ T2 TSE (3sk1) Axial C+ T1 FLAIR (3sk1) Coronal C+ T1 FLAIR (3sk1)  Precontrast Sagittal T1 FLAIR, T2, T2 T2 FLAIR with 3mm reconstructions in 3 planes DWI/ADC- Resolve or 6- direction (4sk0) SWI Post-contrast Sagittal T1 non-IR with 3mm reconstructions in 3 planes Please image following 5 min delay to allow for contrast circulation	Axial and coronal contrast enhanced T1s to follow T2 to allow contrast circulation time  Scan through whole brain (skull to skull) on sagittal images  EOV=23cm  Important to do as close to CMSC protocol as possible.  In this has been specifically requested by JMW Neurology (Dr. Hermann).  It may not be possible to do his protocol on the open magnets (specifically the 0.7)  (specifically the 0.7) or the older 1.5  This section imaging is required, however.  Label these studies / sequences in PACS as CMSC Protocol?  FOV=23cm	
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	Axial T1 TSE (4sk1) Axial T2 GRE (4sk1) Axial DWIADC (3 Direction if possible ), reconstruct at 5sk0 Axial FLARE FAT SAT (4sk1) Axial FLARE FAT SAT (4sk1) Axial C+ T1 TSE (4sk1) Axial C+ T1 TSE (4sk1) Coronal C+ TSE (4sk1)  Sagittal volumetric T1 inversion recovery with 3mm reconstructions (3 plane)  *If possible , Sagittal volumetric 3D T2 FLAIR with 3mm reconstructions (3 plane)  *If possible volumetric 3D T2 with 3mm reconstructions (3 plane)  *If volumetric imaging not possible , axial T2 and axial and Sagittal and FLAIR (3sk0) Axial T1 spin echo (3sk0) Axial GRE (3sk)) DWIADC (5sk0) Sagittal volumetric T1 non-IR post-contrast with 3mm reconstructions (3 plane)  Axial C+ T1 (3sk0)  Coronal T1 TSE (3sk0.3) Coronal T1 TSE (3sk0.3) Axial T1 TSE (3sk0.3) Axial T2 fat sat (3sk0.3)	Axial T1 FLAIR (3sk1) SWI (3sk1) with MIPs Resolve or 6-Direction DWI/ADC, reconstruct at 4sk0 Axial FLAIR FAT SAT Axial C+ T2 TSE (3sk1) Axial C+ T1 FLAIR (3sk1) Coronal C+ T1 FLAIR (3sk1)  Precontrast Sagittal T1 FLAIR, T2, T2 T2 FLAIR with 3mm reconstructions in 3 planes DWI/ADC- Resolve or 6- direction (4sk0) SWI Post-contrast Sagittal T1 non-IR with 3mm reconstructions in 3 planes Please image following 5 min delay to allow for contrast circulation	Axial and coronal contrast enhanced T1s to follow T2 to allow contrast circulation time  Scan through whole brain (skull to skull) on sagittal images  FOV=23cm  Important to do as close to CMSC protocol as possible , this has been specifically requested by JMW Neurology (Dr. Hermann). It may not be possible to do this protocol on the open magnets (specifically the 0.7) (specifically the 0.7) or the older 1.5 This section imaging is required , however .  Label these studies / sequences in PACS as CMSC Protocol?  FOV=23cm  FOV=25cm sagittal and coronal FOV=18cm axial  Scan from pituitary through clavicles (lower if substernal extension of Thyroid ) on axial Scan from posterior neck through nose/ chin on coronals	
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	Ax Prop FLAIR (5/1)		* If no Brain MRI completed within last 7 days, please complete Brain with contrast protocol in addition to Stealth/Treatment Plan protocol sequences.
<del></del>	Ax FSPGR 3D (2/-1) Ax Prop FI AIR (5/1)	SAME	FOV=24 for 3D : FOV= 22 for FLAIR  * If no Resin MPI completed within lest 7 days, places complete Brain with contract protocol
Stealth/ Treatment Plan *			
	Sagittal C+ T1 fat sat (3sk0.5)	Sagittal C+ T1 fat sat (3sk0.5)	
	Sagittal STIR (3sk0.5)	Sagittal STIR (3sk0.5)	
<del></del>	Sagittal 11 ISE (38k0.5) Sagittal T2 TSE (38k0.5)	Sagittal T2 TSE (3sk0.5)	
	Separate acquisitions for cervical, thoracic, and lumbar spine Sagittal T1 TSE (3sk0.5)	Separate acquisitions for cervical, thoracic, and lumbar spine Sagittal T1 FLAIR (3sk0.5)	
Spine Survey			
	Coronal FLAIR (2sk0.5)	Coronal FLAIR (2sk0.5)	FOV=23cm
	Coronal T2 TSE (2sk0.5)	Coronal T2 TSE (2sk0.5)	Sagittal volumetric cover scalp to scalp
	Sagittal T1 MPRAGE with 2mm recons	Sagittal T1 MPRAGE with 2mm recons	Added coronal seizure sequences perpendicular to the temporal lobe
	Coronal C+ TSE (4sk1)	Coronal C+FLAIR (3sk1)	
	Axial C+ T1 TSE (4sk1)  Axial C+ T1 TSE (4sk1)	Axial C+ 12 ISE (38k1) Axial C+T1 FLAIR (38k1)	FOV=23cm
	Axial FLAIR FAT SAT (4sk1) Axial C+ T2 TSE (4sk1)	Axial FLAIR FAT SAT (3sk1) Axial C+ T2 TSE (3sk1)	Scan through whole brain (skull to skull) on sagittal images
	Axial DWI/ADC (3 Direction if possible ), reconstruct at 5sk0	Resolve or 6-Direction DWI/ADC, reconstruct at 4sk0	Seen through whole brain (chall to chall) on conittal images
	Axial T2 GRE (4sk1)	SWI (3sk1) with Mis	Axial and coronal contrast enhanced T1s to follow T2 to allow contrast circulation time
	Axial T1 TSE (4sk1)	Axial T1 FLAIR (3sk1)	Inject contrast, followed immediately by Axial T2
Seizure	Sagittal T1 TSE (4sk1)	Sagittal T1 FLAIR (3sk1)	* Should not be completed on ED patients and performed as inpatient or outpatient only  Remove eADC from all protocols, should only do ADC
	- 2000 ( 1 2 )		
	Ax STIR (4/1) Ax T1 FSE (4/1)		
	Cor T1 (4/1) Ax STIR (4/1)		
	Cor STIR (4/1)		
	Sag T1 FSE (4/1)		
	Cor 11 FSE Global (6/1) Sag T2 FS (4/1)		
	Cor STIR FSE Global (6/1) Cor T1 FSE Global (6/1)	SAME	FOV=44 for global FOV =20 for Sag & Axial FOV=24 Coronal
Sacrum		2.10	
	Dynamic Contrast enhanced sequence (Coronar)		
	Sagittal C+ T1 (2sk0)  Dynamic contrast enhanced sequence (Coronal)		
	Coronal C+T1(2sk0)		
	Coronal T2 TSE (2sk0)		
	Coronal T1 TSE (2sk0)		Coronal scan from anterior margin of pons through orbital apex
	Sagittal T1 TSE (2sk0)		Sagittal scan from mid-orbit through mid-orbit
	Optionally with Brain WITH Pituitary	SAME	FOV=13cm (cone to pituitary)
Pituitary		0.1300	
	FA 113E (4/1)		
	Ax EPI GRE (4/1) Ax TISE (4/1)		
	Ax T2 Prop (4/1)		
	Ax Prop FLAIR (4/1)		
	AX IR (4/1) AX DWIRTFA (4/1)		
	Sag T1 SE (5/1) Ax IR (4/1)	SAME	FOV= 24 and Sag FOV=18 Axial
Peds Routine	a		
	DWI (3sk0.3)		
	Coronal C+ T1 fat sat (3sk0.5)		
	Axial C+T1 fat sat (3sk0.5)		
	Axial T2 fat sat (3sk0.5)		
	Axial T1 TSE (3sk0.5)		107-10cm
	Coronal 11 (3sk0.5) Coronal STIR (3sk0.5)		FOV=18cm
	Orbits: Coronal T1 (3sk0.5)		and maxillary teeth to above orbits on axial
	Preferably with Brain WITH	SAME	Orbit images should extend from the lens to mid-pons coronal and maxillary teeth to above
Orbits			
	Coronal STIR (3sk0.3)		
	Axial T2 (3sk0.3)		Scan to lateral sides of neck on sagittal
	Axial DWI - 3mm		Scan from posterior neck through nose/ chin on coronals
	Axial T1 ISE (38k0.3) Axial T2 fat sat (3sk0.3)		Scan from pituitary through clavicles (lower if substernal extension of Thyroid ) on axial
	Coronal T1 TSE (3sk0.3) Axial T1 TSE (3sk0.3)		FOV=18cm axial
	Sagittal T1 TSE (3sk0.3)	SAME	FOV=25cm sagittal and coronal
Neck Without			

Thoracic With			
	Sagittal T1 TSE (3sk0.5)	Sagittal T1FLAIR (3sk0.5)	Axial images from C7-L1
	Sagittal T2 TSE (3sk0.5)	Sagittal T2 TSE (3sk0.5)	
	Sagittal STIR (3sk0.5)	Sagittal STIR (3sk0.5)	
	Axial T1 TSE (4sk1)	Axial T1 FLAIR (4sk1)	
	Axial T2 TSE (4sk1)	Axial T2 TSE (3sk0.5)	
	Coronal T1 TSE (3sk0.5)	Coronal T1 TSE (3sk0.5)	
	Sagittal DWI (3sk0.3)	DWI sagittal (3sk0.3)	
	Axial C+ T1 fat sat (4sk1)	Axial C+ T1 fat sat (4sk1)	
	Sagittal C+ T1 FSE (3sk0.5)	Sagittal C+ T1 FLAIR (3sk0.5)	
Thoracic Without	a to a married to a	a in their the atom	LUL C MU
	Sagittal T1 TSE (3sk0.5) Sagittal T2 TSE (3sk0.5)	Sagittal T1FLAIR (3sk0.5) Sagittal T2 TSE (3sk0.5)	Axial images from C7-L1
	Sagittal STIR (3sk0.5)	Sagittal STIR (3sk0.5)	
	Axial T1 TSE (4sk1)	Axial T1 FLAIR (4sk1)	
	Axial T2 TSE (4sk1)	Axial T2 TSE (3sk0.5)	
	Coronal T1 TSE (3sk0.5)	Coronal T1 TSE (3sk0.5)	
	Sagittal DWI (3sk0.3)	DWI sagittal (3sk0.3)	
TMJ			
INIJ	Localizer (coronal and sagittal)	SAME	FOV=12cm
	Sagittal PD oblique Right Closed (2sk0)	SAME	POV=120m
	Sagittal PD oblique Left Closed (2sk0)		Could do axial or coronal T1 of head (4sk1) instead of localizer
	Sagittal T2 oblique Right Closed (2sk0)		Could do axial of Cotonial 11 of flead (+sk1) fissead of focalizer
	Sagittal T2 oblique Left Closed (2sk0)		
	Coronal T1 Right Closed (2sk0)		
	Coronal T1 Kight Closed (2sk0)  Coronal T1 Left Closed (2sk0)		
	Sagittal PD oblique Right Open (2sk0)		
	Sagittal PD oblique Left Open (2sk0)		
	Sagittal T2 oblique Right Open (2sk0)		
	Sagittal T2 oblique Left Open (2sk0)		
	Sagittai 12 oolique Leit Open (28k0)		
Trigeminal			
g	Complete Brain MRI protocol	SAME	Whole brain FOV= 22cm
	Posterior fossa :		Posterior fossa FOV=18cm
	Axial T1 (3sk0.5)		
	Axial T2 fat sat (3sk0.5)		Scan from the suprasellar cistern to the C1 level on axials, cover through posterior fossa
	Coronal T1 (3sk0.5)		and orbital apex on coronals
	Axial Fiesta w/coronal reformats		·
	Axial C+T1 FS (3sk0.5)		
	Coronal C+T1 FS (3sk0.5)		
	Coronal C+ T1 whole head (4sk1)		
Spine SBRT Treatment Planning			
-	Coronal T1 TSE (3sk 0.5)	Coronal T1 TSE (3sk 0.5)	Axial coverage to be specified on order. Axial images only acquired through areas to be treated
	Sagittal T1 TSE (3sk0)	Sagittal T1 TSE (3sk0)	Sagittal coverage = Typical FOV for region of spine to be treated (i.e. If treatment to cervical spine cover skull base to T1)
	Sagittal T2 TSE (3sk0)	Sagittal T2 TSE (3sk0)	FOV = 12cm on Axials
	Sagittal STIR (3sh0)	Sagittal STIR (3sk0)	
	Axial T2 TSE (2sk0)	Axial T2 TSE (2sk0)	Axial Plane = Perpendicular to vertebral body. If vertebral body is fractured image perpendicular to bed
	Precontrast Axial T1 FLAIR (2sk0)	Precontrast Axial T1 TSE (2sk0)	
	Axial C+ T1 fat sat (2sk0)	Axial C+ T1 fat sat (2sk0)	
		Sagittal C+T1 TSE (3sk0)	