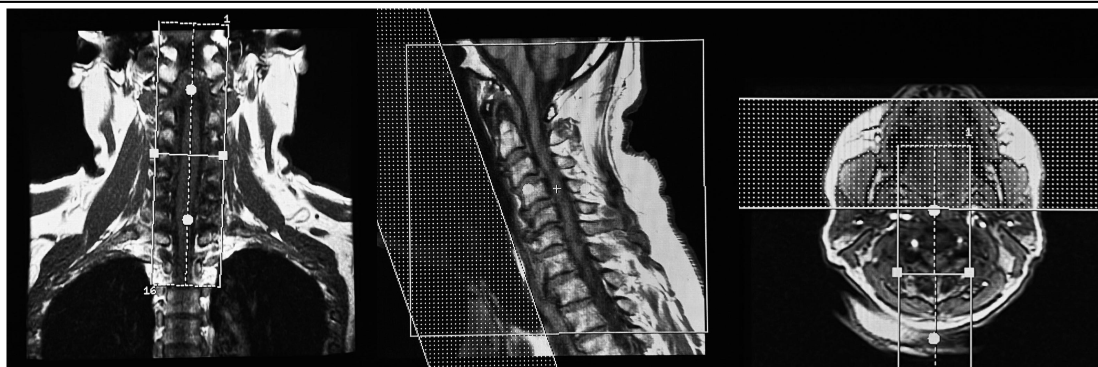
CSPINE

12/15/2022

Non Contrast Indications:	stenosis, radiculopathy, myelopathy, trauma, MS
Contrast Indications:	stenosis, radiculopathy, myelopathy, infection, tumor, syrinx, MS
Position:	head first, supine, center at mid neck
FOV:	T1 to craniocervical junction, use anterior sat band, avoid excessive FOV

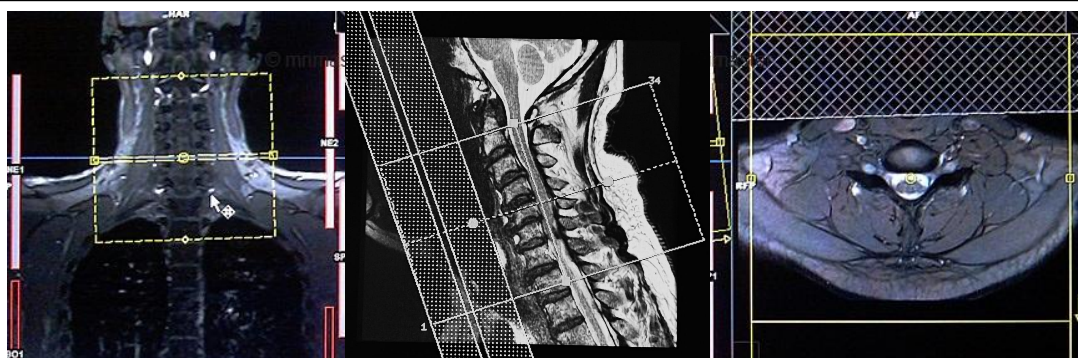
SEQUENCE	FOV	S/S	COMMENTS / POSITIONING TIPS	
SAG T1 FSE/TSE	FOV 200	3.0/0.3	Adjust FOV to cover C-spine	parallel to cord on coronal view
SAG T2 FSE/TSE	FOV 200	3.0/0.3		
SAG STIR FSE/TSE	FOV 200	3.0/0.3		
AX T2 CUBE / SPACE	FOV 180	2mm	FOR TRAUMA: mid T1 to mid clivus	
AX 2D MERGE / MEDIC	FOV 180	3.0/0.3	FOR TRAUMA: mid T1 to mid clivus	
TRAUMA				
COR T2	FOV 200	2-3mm	Mid T1 through craniocervical junction, see photos	
CONTRAST	myelopathy: cord tumor, MS, infection, cord compression, syrinx			
SAG T1 GD FS	FOV 200	3.0/0.3	No Fat Sat for MS patients	
AX T1 GD	FOV 200	3.0/0.3		

SAGITTAL

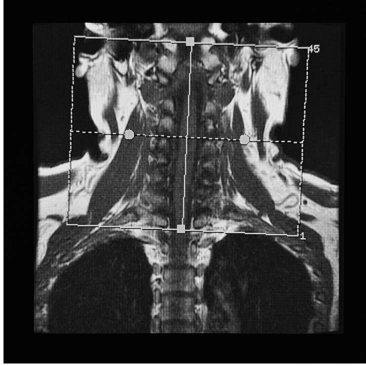
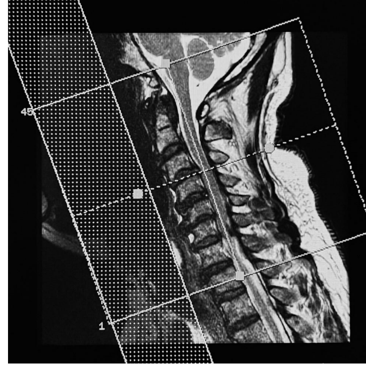


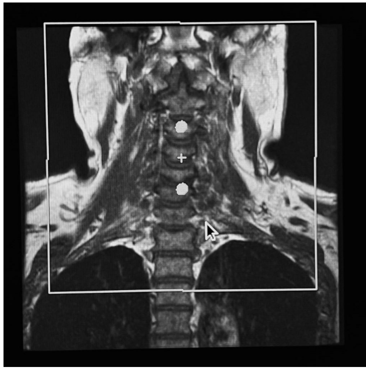
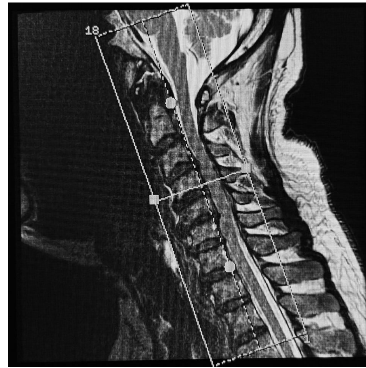
Alignment:	**Angle slices parallel to spinal cord using coronal localizer**
Coverage:	T1 to above foramen magnum, limit FOV to C-spine, thru transverse processes LT to RT
Saturation Band:	In front of esophagus in sagittal plane to avoid swallowing artifacts

AXIAL



Alignment:	perpendicular to spinal cord
Coverage:	Mid T1 - C2
Saturation Band:	In front of esophagus in sagittal plane to avoid swallowing artifacts
	MERGE sat band: two bands next to each other

AXIAL TRAUMA	
 	
Alignment:	perpendicular to spinal cord
Coverage:	mid T1 to Clivus (above foramen magnum)
Saturation Band:	In front of esophagus in sagittal plane to avoid swallowing artifacts

CORONAL TRAUMA	
 	
Alignment:	parallel to spinal cord
Coverage:	thru craniocervical joint to include atlantoaxial joint

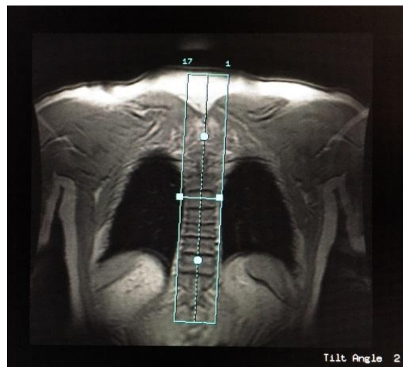
THORACIC SPINE

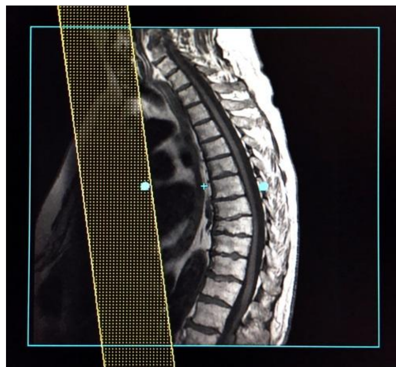
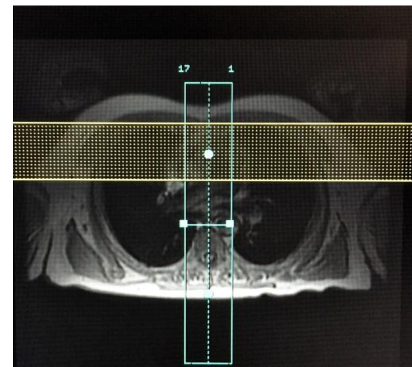
12/15/2022

Non Contrast Indications:	stenosis, radiculopathy, myelopathy, trauma
Contrast Indications:	stenosis, radiculopathy, myelopathy, cord compression, infection, tumor, syrinx, MS
Position:	head first, supine, center over mid sternum
FOV:	L1 to C7, use anterior sat band, avoid excessive FOV

	FOV	S/S	COMMENTS / POSITIONING TIPS
SAG COUNTING LOCALIZER			Please send counting localizer to impax
SAGITTAL T1	FOV 340	3.0/0.3	Adjust FOV to cover from L1- C7 parallel to cord on coronal view
SAGITTAL T2	FOV 340	3.0/0.3	
SAGITTAL STIR	FOV 240	3.0/0.3	
AXIAL T2 BLOCK	FOV 340	4.0/1.0	Cover L1 to C7, split/angle as needed for kyphotic patients
CONTRAST	myleopathy: cord tumor, MS, post surgical, cord compression, syrinx		
SAGITTAL T1 GD FS	FOV 340	3.0/0.3	
AX T1 GD BLOCK	FOV 200	4.0/1.0	
IF CONTRAST			
AX T1 PRE BLOCK	FOV 200	4.0/1.0	
FOR INFECTION			
AX T1 PRE BLOCK	FOV 200	4.0/1.0	
SAGITTAL T1 GD FS	FOV 340	3.0/0.3	
AXIAL T1 GD FS	FOV 200	4.0/1.0	

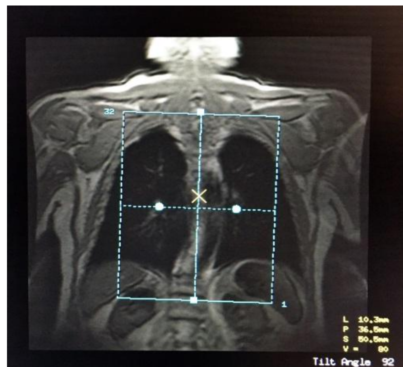
SAGITTAL

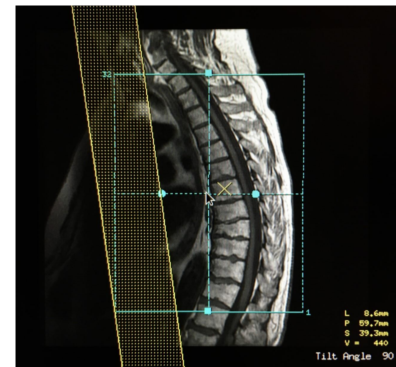


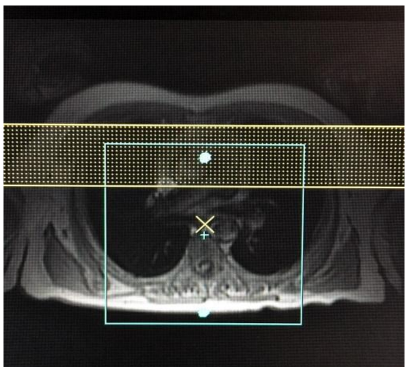



Alignment:	**Angle slices parallel to spinal cord using coronal localizer**
Coverage:	L1 to C7, limit FOV to T-spine, thru transverse processes from LT to RT
Saturation Band:	Place sat band over chest anterior to spine

AXIAL POST







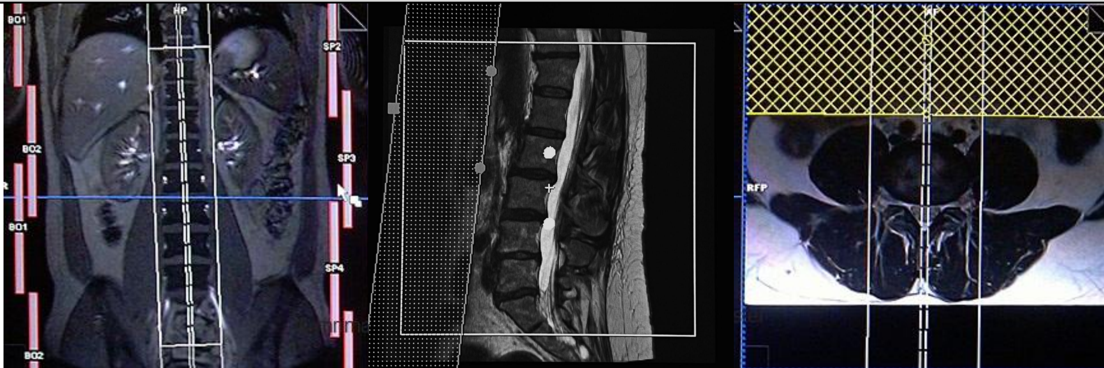
Alignment:	perpendicular to spinal cord, split/angle as needed for kyphotic patients
Coverage:	Perpendicular to cord, Mid L1 to Mid C7, split into 2 blocks as needed for kyphosis
Saturation Band:	Place sat band over chest anterior to spine

LSPINE	12/15/2022

Non Contrast Indications:	stenosis, radiculopathy, myelopathy, trauma
Contrast Indications:	stenosis, radiculopathy, myelopathy, cord compression, infection, tumor, syrinx
Position:	supine, center 4 inches above crest
FOV:	S1 to T12, use anterior sat band, avoid excessive FOV

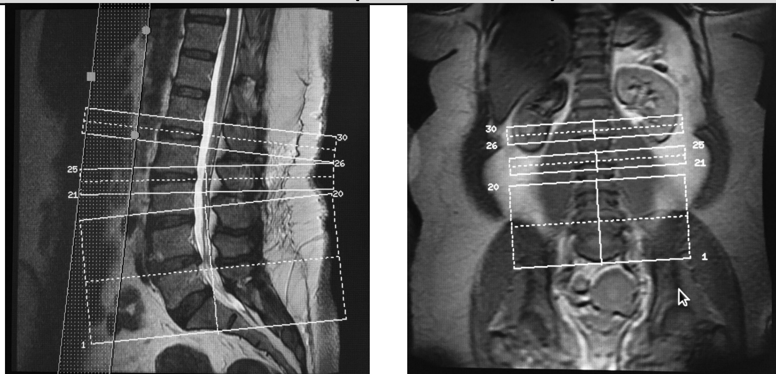
	FOV	S/S	COMMENTS	POSITIONING TIPS
SAGITTAL T1	FOV 250	4.0/0.4	Adjust FOV to cover from T12-S1	parallel to cord on coronal view
SAGITTAL T2	FOV 250	4.0/0.4		
SAGITTAL STIR	FOV 250	4.0/0.4		
AXIAL T2	FOV 200	4.0/0.5	Radiculopathy: 1st block cover S1-L3, 2nd block L3-L2 space, 3rd block L2-L1 space Myelopathy / Post Surgery / FX : block to cover entire cord	
AXIAL T1	FOV 200	4.0/0.5	Radiculopathy: 4 slices through all 5 disc spaces Myelopathy / Post Surgery / FX : block to cover entire cord	
CONTRAST	myelopathy: cord tumor, post surgical, cord compression			
SAGITTAL T1 GD FS	FOV 250	4.0/0.4		
AXIAL T1 GD BLOCK	FOV 200	4.0/0.5		
INFECTION	block to cover entire cord on axials pre & post			
SAGITTAL T1 GD FS	FOV 250	4.0/0.4		
AXIAL T1 GD FS BLOCK	FOV 200	4.0/0.5		

SAGITTAL



Alignment:	**Angle slices parallel to spinal cord using coronal localizer**
Coverage:	Cover from S1 up to T12, through transverse processes LT to RT, limit excessive FOV
Sat Band:	Placed over abdomen in front of aorta to avoid peristalsis and breathing artifacts

AXIAL T2 (RADICULOPATHY)



Alignment:	Align slices to intervertebral disc spaces on coronal and sagittal images
Coverage:	Radiculopathy : 1st block cover S1-L3, 2nd block L3-L2 space, 3rd block L2-L1 space
	Myelopathy / Post Surgery / FX : full block to cover S1 to mid T12
Sat Band:	Placed over abdomen in front of aorta to avoid peristalsis and breathing artifacts

AXIAL T1 (RADICULOPATHY)	
Alignment:	Align slices to intervertebral disc spaces on coronal and sagittal images
Coverage:	Radiculopathy: 4 slices through all 5 disc spaces / Myelopathy: block to cover entire cord
Sat Band:	Placed over abdomen in front of aorta to avoid peristalsis and breathing artifacts

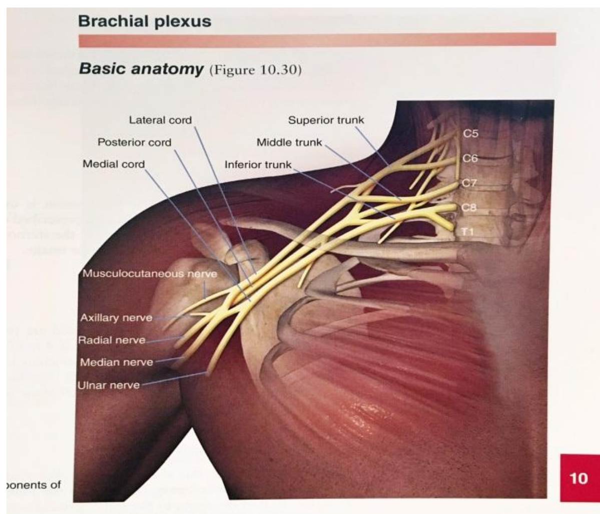
AXIAL BLOCK	
Alignment:	Perpendicular to spinal cord
Coverage:	Myelopathy / Post Surgery / FX : full block to cover S1 to mid T12
Sat Band:	Placed over abdomen in front of aorta to avoid peristalsis and breathing artifacts

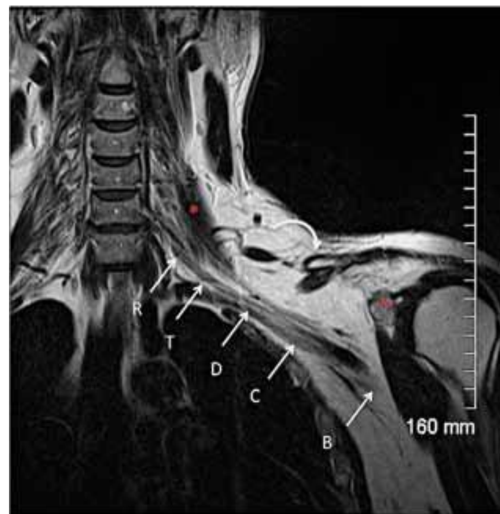
BRACHIAL PLEXUS	12/15/2022

Indications:	weakness/numbness of upper extremity, tumor, peripheral neuropathy, trauma
Position:	Head first, supine / center on sternoclavicular joint
FOV:	C3 - T4 / spinal cord to affected side shoulder joint

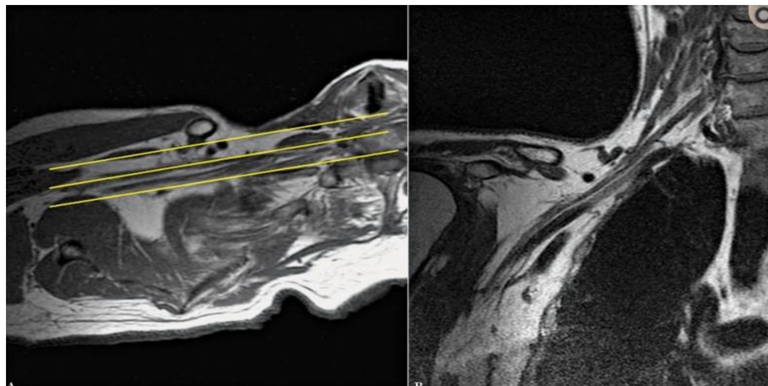
	FOV	S/S	COMMENTS	POSITIONING TIPS
COR STIR Bilateral	40	3.0/0.0		
COR T1 OBL unilateral	24	3.0/0.0		
AX T1 OBL unilateral	24	3.0/0.0		
AX T2 FS OBL unilateral	24	3.0/0.0		
SAG T1 OBL unilateral	20	3.0/0.0		
SAG STIR OBL unilateral	20	3.0/0.0		
CONTRAST				
AX T1 OBL GD FS unilateral	24	3.0/0.0		
SAG T1 OBL GD FS unilateral	20	3.0/0.0		
COR T1 OBL GD FS unilateral	24	3.0/0.0		

The brachial plexus is a nerve plexus formed by nerve roots C5, C6, C7, C8 & T1

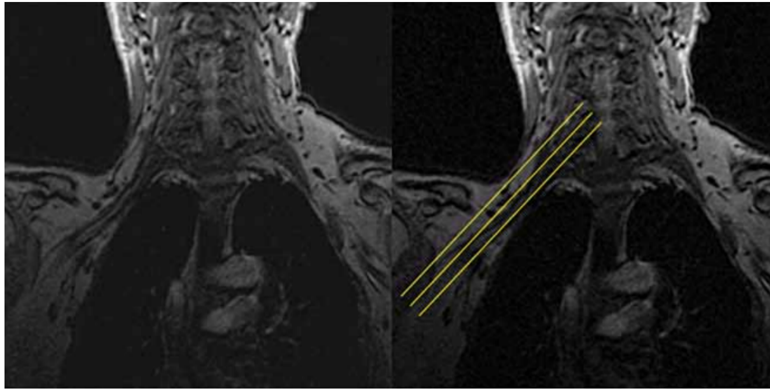


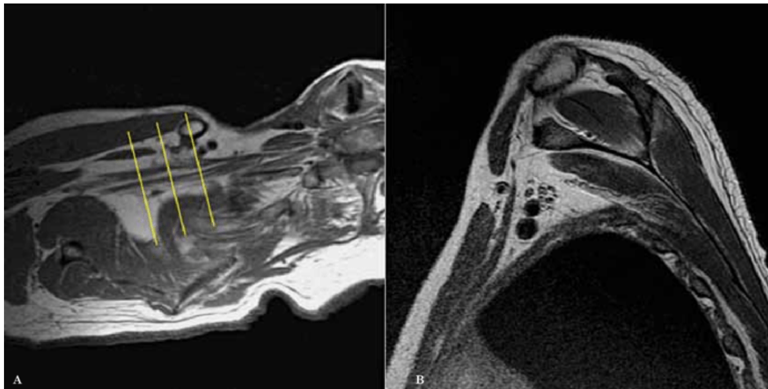


CORONAL OBLIQUE



Alignment:	parallel to the brachial plexus on axial view
Coverage:	slices to include vertebrae to SC joint, FOV to include spine to affected shoulder joint
Phase:	R/L to avoid chest and heart motion artifacts

AXIAL OBLIQUE	
	
Alignment:	parallel to brachial plexus on coronal view
Coverage:	FOV to include spine to affected side shoulder joint
Phase:	A/P with NPW to reduce pulsation and swallowing artifacts

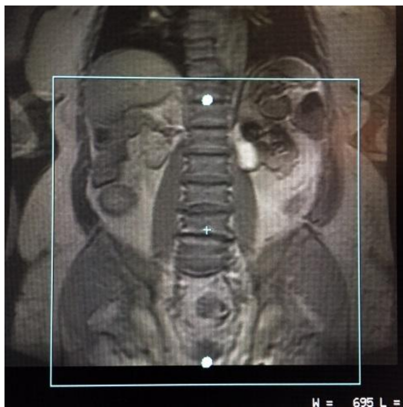
SAGITTAL OBLIQUE	
	
Alignment:	perpendicular to brachial plexus on axial & coronal view
Coverage:	slices to include spinal cord to affected side shoulder joint.
Phase:	A/P with NPW to reduce pulsation and swallowing artifacts

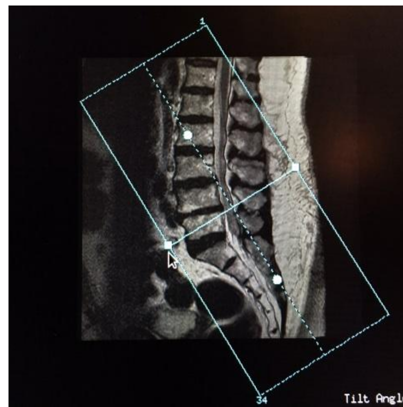
LUMBOSACRAL PLEXUS	12/20/2022

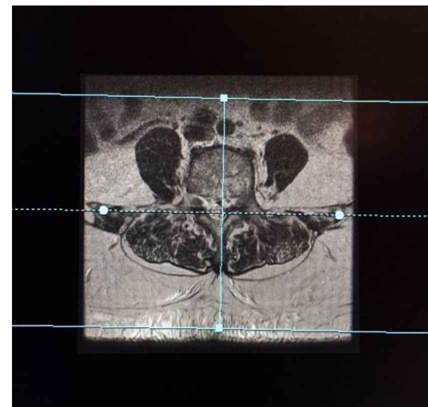
Indications:	malignancy, treatment planning, plexopathy, sacral or coccyx pain, leg pain, sciatica, trauma
Position:	feet first, supine / center over crest

	FOV	S/S	COMMENTS	POSITIONING TIPS
CORONAL STIR OBL	FOV 34	4.0/0.5	oblique to sacrum, include hip joints	
COR T1 OBL	FOV 34	4.0/0.5		
COR T2 FS OBL	FOV 34	4.0/0.5		
AXIAL T2 FS	FOV 26	4.0/1.5		
AXIAL T1	FOV 26	4.0/1.5		
CONTRAST				
CORONAL T1 FS GD OBL	FOV 34	4.0/0.5		
AXIAL FS GD	FOV 26	4.0/1.5		

CORONAL OBLIQUE

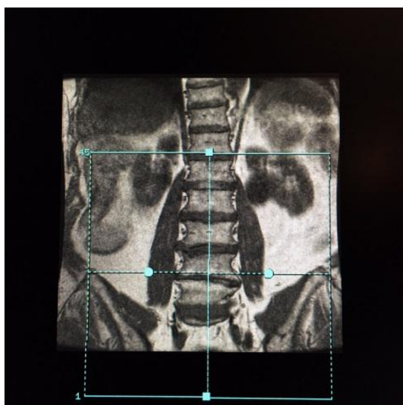


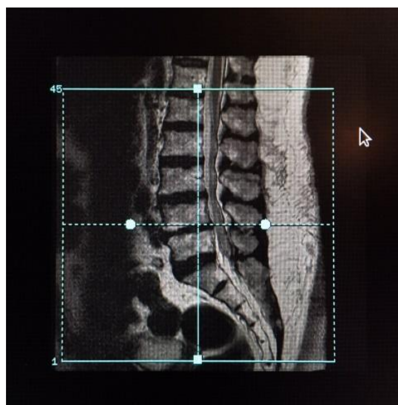


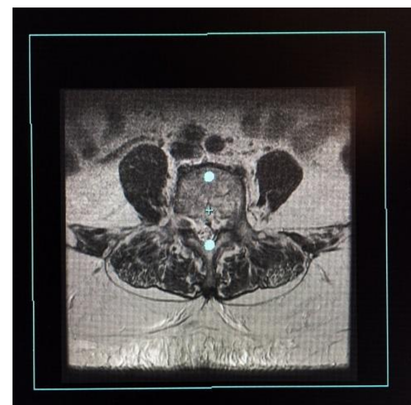


Alignment:	angle slices to sacrum on sagittal, check other planes
Coverage:	L2 to below greater trochanter

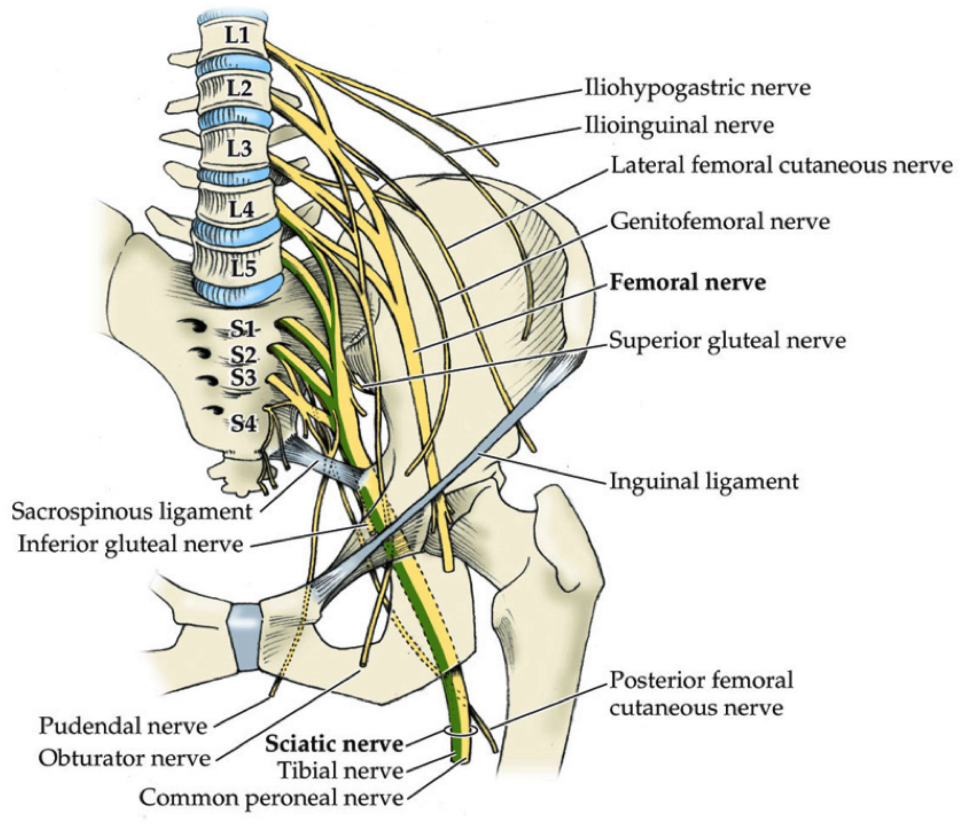
AXIAL







Alignment:	angle slices perpendiular to spinal canal on sagittal, check other planes
Coverage:	L2 to below greater trochanter


L1
L2
L3
L4
L5
S1
S2
S3
S4
Iliohypogastric nerve
Ilioinguinal nerve
Lateral femoral cutaneous nerve
Genitofemoral nerve
Femoral nerve
Superior gluteal nerve
Inguinal ligament
Sacrospinous ligament
Inferior gluteal nerve
Posterior femoral
cutaneous nerve
Pudendal nerve
Obturator nerve
Sciatic nerve
Tibial nerve
Common peroneal nerve