

Topic

MRI Brain Standard

Typical indications

Headache  
Neuropathy  
Stroke  
Altered Mental Status

Sequences the Radiologist Should See

BEFORE CONTRAST  
SAGITTAL T1 SE  
AXIAL T2 FSE  
AXIAL FLAIR  
AXIAL T2 GRE  
AXIAL T1  
AXIAL DIFFUSION  
AFTER CONTRAST  
AXIAL T1 SE  
CORONAL T1 SE

General anatomic limits in each plane  
(Additional thin section images as required)

AXIAL

Vertex to mid body of C2

SAGITTAL

Lateral hippocampal margins

CORONAL

Vertex to mid body of C2

Date Created

Dec 7, 2009 11:05 AM

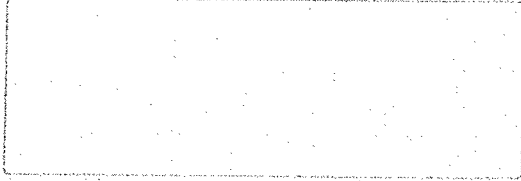
Date Modified

Jan 11, 2010 9:59 AM

Topic

MRI Orbits

Typical Indications



General anatomic limits in each plane  
(Additional thin section images as required)

Sequences the Radiologist Should See

BEFORE CONTRAST

AXIAL T1 FAT SAT (Thins through orbits)  
CORONAL T1 (Thins through orbits)  
AXIAL T2 FSE (Thins through orbits)  
CORONAL T2 (Thins through orbits)

AFTER CONTRAST

AXIAL T1 FAT SAT (Thins through orbits)  
CORONAL T1 (Thins through orbits)

AXIAL

Mid frontal lobes to mid  
maxillary sinuses

SAGITTAL

Right skin surface to left  
skin surface

CORONAL

Tip of nose to brain stem

Date Created

Jan 4, 2010 8:06 AM

Date Modified

Jan 11, 2010 10:18 AM

Topic

MRI Brain (Limited)

Typical Indications

Stroke

General anatomic limits in each plane  
(Additional thin section images as required)

Sequences the Radiologist Should See

BEFORE CONTRAST  
SAGITTAL T2  
AXIAL DIFFUSION

AXIAL

Mid body of C2 to vertex

SAGITTAL

Lateral hippocampal margins

CORONAL

Date Created

Jan 4, 2010 8:05 AM

Date Modified

Jan 11, 2010 10:05 AM

Topic

MRI BRAIN WITH IACs

Typical Indications

Sensorineural Hearing Loss

General anatomic limits in each plane  
(Additional thin section images as required)

AXIAL

Vertex to mid body of C2

SAGITTAL

Left skull to right skull

CORONAL

Mid globes to posterior skull  
posterior skull

Date Created

Dec 14, 2009 9:08 AM

Date Modified

Jan 11, 2010 10:11 AM

Sequences the Radiologist Should See

BEFORE CONTRAST

- SAGITTAL T2
- AXIAL T2
- AXIAL FLAIR
- AXIAL T1 SE
- AXIAL T2 GRE
- AXIAL DIFFUSION
- CORONAL T1 FE (IACS)
- AXIAL FIESTA (HIGH RES)

AFTER CONTRAST

- AXIAL T1 FAT SAT (IAC)
- AXIAL T1 (BRAIN)
- CORONAL T1 (BRAIN)

Topic

MRI Brain (Seizure)

Typical Indications

Seizure

General anatomic limits in each plane  
(Additional thin section images as required)

AXIAL

Vertex to mid body of C2

SAGITTAL

Right skull through left skull

CORONAL

Mid globes to posterior skull  
posterior skull

Date Created

Dec 13, 2009 7:39 AM

Date Modified

Jan 11, 2010 10:15 AM

Sequences the Radiologist Should See

BEFORE CONTRAST

SAGITTAL T1 SE  
AXIAL T2 FSE  
CORONAL T2 (THIN SLICES THROUGH TEMPORAL LOBES)  
AXIAL T2 GRE  
AXIAL T1  
AXIAL DIFFUSION

AFTER CONTRAST

AXIAL T1 SE  
CORONAL T1 SE

Topic

MRI Brain (MS)

Typical indications

Multiple Sclerosis

General anatomic limits in each plane  
(Additional thin section images as required)

Sequences the Radiologist Should See

BEFORE CONTRAST

SAGITTAL FLAIR  
 AXIAL T2 FSE  
 AXIAL FLAIR  
 AXIAL T2 GRE  
 AXIAL T1  
 AXIAL DIFFUSION

AFTER CONTRAST

AXIAL T1 SE  
 CORONAL T1 SE

AXIAL

Vertex to mid body of C2

SAGITTAL

Lateral hippocampal margins

CORONAL

Vertex to mid body of C2

Date Created

Dec 9, 2009 4:57 PM

Date Modified

Jan 11, 2010 10:00 AM

Topic

MRI Brain (Cranial Nerves)

Typical Indications

Cranial Nerve Neuropathy

General anatomic limits in each plane  
(Additional thin section images as required)

Sequences the Radiologist Should See

BEFORE CONTRAST

SAGITTAL T1 SE  
AXIAL T2  
AXIAL FLAIR  
AXIAL T1 SE  
AXIAL T2 GRE  
AXIAL DIFFUSION  
CORONAL T1 FE (BASILAR CISTERNS TO MID BODY C2)  
AXIAL T2 (HIGH RES) (BASILAR CISTERNS TO MID BODY C2)  
AXIAL FIESTA (HIGH RES) (BASILAR CISTERNS TO MID BODY C2)

AFTER CONTRAST

CORONAL T1 FAT SAT (BASILAR CISTERNS TO MID BODY C2)  
AXIAL T1 FAT SAT (BASILAR CISTERNS TO MID BODY C2)  
AXIAL T1 (BRAIN)  
CORONAL T1 (BRAIN)

AXIAL

Vertex to mid body of C2

SAGITTAL

Left skull to right skull

CORONAL

Mid globes to posterior skull  
posterior skull

Date Created

Dec 14, 2009 9:12 AM

Date Modified

Jan 11, 2010 10:14 AM

		MRI Protocol:			LUMBAR SPINE	
		Coil:				
Sequence #:	1	2	3	4	5	6
Sequence Type:	T2 FSE	T1 FSE	STIR	T2 FSE	T1 FSE	*T1 FSE
Orientation:	Sagittal	Sagittal	Sagittal	Axial	Axial	Coronal
Field of View (cm):	28	28	28	20	20	28
Slice Thickness(mm):	4 to 5	4 to 5	4 to 5	4	4	4
Gap:	1	1	1	1	1	1
Contrast:	No	No	No	No	No	No
Matrix:	448x256	384x256	256x192	320x256	256x256	384-256
Nex:	6	4	2	4	4	4

-sagittals to cover from T12 thru S2 inclusively, center slice thru middle of spinal canal

-axials angled thru disc spaces, center slice thru center of disc, expand when needed

such as to include hardware

\*include t1 cor for scoliosis



		MRI Protocol: L-spine post contrast				
		Coil:				
Sequence #:	1	2	3	4	5	6
Sequence Type:	T1 fat sat	*T1 fse				
Orientation:	Sagittal	Axial				
Field of View (cm):	28	20				
Slice Thickness(mm):	4 to 5	4				
Gap:	1	1				
Contrast:	yes	yes				
Matrix:	256x192	256x256				
Nex:	4	4				

\*include axials if post-op or abnormal enhancement on sagittal

		MRI Protocol: THORACIC SPINE				
		Coil:				
Sequence #:	1	2	3	4	5	6
Sequence Type:	T2 FSE	T1 FSE	STIR	T2 FSE		
Orientation:	Sagittal	Sagittal	Sagittal	Axial		
Field of View (cm):	34	34	34	20		
Slice Thickness(mm):	3	3	3	4		
Gap:	1	1	1	1		
Contrast:	No	No	No	No		
Matrix:	448x280	384x280	256x192	320 x 256		
Nex:	4	4	2	4		

- include sagittal reference image from skull base down for count
- axials angled thru disc spaces, center slice thru center of disc, expand when needed
- sagittals to cover from T1 thru T12, inclusively with center slice thru mid canal
- include T1 coronal for scoliosis

		MRI Protocol: T-spine post-contrast				
		Coil:				
Sequence #:	1	2	3	4	5	6
Sequence Type:	T1 fat sat	*T1 fse				
Orientation:	Sagittal	Axial				
Field of View (cm):	34	20				
Slice Thickness(mm):	3	4				
Gap:	1	1				
Contrast:	yes	yes				
Matrix:	256x256	256x256				
Nex:	4	4				

\*include axials post contrast if abnormal enhancement on sagittal; if post-op or abnormal exam, included t1 axials pre & post

		MRI Protocol: CERVICAL SPINE				
		Coil:				
Sequence #:	1	2	3	4	5	6
Sequence Type:	T2 FSE	T1 FSE	STIR	T2*GE MTC	3D BASG	*T2 FSE
Orientation:	Sagittal	Sagittal	Sagittal	Axial	Axial	Axial
Field of View (cm):	22	22	22	20	20	20
Slice Thickness(mm):	3	3	3	3	2.5	3
Gap:	1	1	1	1	0	1
Contrast:	No	No	No	No	No	No
Matrix:	320x320	320x256	256x192	224x224	280x280	256x200
Nex:	2	4	2	2	2	4

- sagittals from pons thru T2, inclusively with center slice thru mid canal
- axials seq #4 angled thru disc spaces, center slice thru center of disc, seq#6 should cover from C2 thru T1
- include T1 coronal for scoliosis or subluxation
- \*if metal, run T2 fse axials instead of 3D BASG

		MRI Protocol: C-spine post-contrast				
		Coil:				
Sequence #:	1	2	3	4	5	6
Sequence Type:	T1 fat sat	T1 FSE				
Orientation:	Sagittal	Axial				
Field of View (cm):	22	20				
Slice Thickness(mm):	3	3				

Gap:	1	1				
Contrast:	yes	yes				
Matrix:	256x192	256 x 256				
Nex:	4	2				

-include T1 axial if abnormal enhancement is seen on sagittal, if abnormality seen on pre-contrast images, include T1 axial pre & post

MRI Protocol:		BRAIN				
		Coil:				
Sequence #:	1	2	3	4	5	6
Sequence Type:	T2 FSE	DWI	T2 FSE	T2*GE	FLAIR	T1 FSE
Orientation:	Sagittal	Axial	Axial	Axial	Axial	Axial
Field of View (cm):	23	25	22	22	22	22
Slice Thickness(mm):	5	5	5	5	5	5
Gap:	1	1	1	1	1	1
Contrast:	No	No	No	No	No	No
Matrix:	320x320	128x128	320x256	256x220	256x256	256x256
Nex:	1	2	3	2	1	2

MRI Protocol:		Brain continued				
		Coil:				
Sequence #:	7(if w/o)	7(post-cont)	8(post-cont)	(h/o MS)	(seizures)	
Sequence Type:	T2 FSE	T1 FSE	T1 Fat Sat	FLAIR	T2 FSE	
Orientation:	Coronal	Axial	Coronal	Sagittal	Coronal	
Field of View (cm):	22	22	22	23	20	
Slice Thickness(mm):	5	5	5	5	3	
Gap:	1	1	1	1	1	
Contrast:	No	yes	yes	No	No	
Matrix:	320x320	256x256	256x220	256x224	320x320	
Nex:	2	2	2	2	2	

-T2 coronal thins for h/o seizure should be angled perpendicular to long axis of hippocampus covering the temporal lobes

MRI Protocol:		ATTN: Pituitary – Brain seq 1-5, th				
		Coil:				
Sequence #:	6	7	8	9	10	
Sequence Type:	T1 FSE	T1 FSE	T1 FSE	T1 fat sat	T1 FSE	
Orientation:	Coronal	Sagittal	Sagittal	Coronal	Axial	
Field of View (cm):	18	18	18	18	22	
Slice Thickness(mm):	3	3	3	3	5	
Gap:	0	0	0	0	1	
Contrast:	No	No	yes	Yes	Yes	
Matrix:	256x256	256x256	256x256	224x224	256x256	
Nex:	3	3	3	2	2	

\*Seq # 6-9 thru pituitary/sella, seq#10 whole head

MRI Protocol:		ATTN: IAC – Brain seq #1-5, the				
		Coil:				
Sequence #:	6	7	8	9	10	11
Sequence Type:	T1 FSE	T2 FSE 3D	T1 FSE	T1 fat sat	T1 FSE	T1 FSE
Orientation:	Coronal	Axial	Axial	Axial	Coronal	Axial
Field of View (cm):	18	18	18	18	18	22
Slice Thickness(mm):	3	1	3	3	3	5
Gap:	0	(recon 0.5)	0	0	0	1
Contrast:	No	No	No	Yes	Yes	Yes
Matrix:	256x256	320x320	256 x 256	256x224	256x256	256x256
Nex:	3	1	3	2	3	2

Seq # 6-10 thru 7<sup>th</sup> & 8<sup>th</sup> nerve complexes/IAC's, seq # 11 whole head