

MRI Brain Routine (and Fast Stroke)

Updated 07/04/24

Reviewed 05/14/25

Routine Brain:

Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice
T1	T1 SAG	sag	no	5	2	left
T2	T2 FS AX	ax	yes	5	1.5	base
T1	T1 AX	ax	no	5	1.5	base
*T1	T1 COR	cor	no	5	1.5	back
FLAIR	FLAIR AX	ax	no	5	1.5	base
**SWI	SWI AX	ax	no	5	1.5	base
DWI	DWI AX	ax	yes	5	1.5	base

CONTRAST - 2 mL/sec standard dose gadolinium (0.2 mL/kg Clariscan or 0.1 mL/kg Gadavist) followed by 20 mL saline flush.

T1	T1 POST AX	ax	no	5	1.5	base
T1	T1 POST COR	cor	no	5	1.5	back
T1	T1 POST SAG	sag	no	5	2	left
***3D T1 FSPGR/MPRAGE	AX THINS	ax	no	1	none	base

*Add the T1 COR pre contrast if the indication is hydrocephalus and/or NPH.

**GRE if SWI is not available.

***Add the 3D T1 brain lab sequence in the following patients: known, suspected or previously treated brain mass; known cancer or metastatic workup and patients with headache.

For the 3D T1 brain lab sequence: no angulation, anterior nose to posterior skull (front/back coverage) and top of skull to bottom of mandible (top/bottom coverage).

Fast Stroke Protocol:

FLAIR	FLAIR AX	ax	no	5	1.5	base
**SWI	SWI AX	ax	no	5	1.5	base
DWI	DWI AX	ax	yes	5	1.5	base

**GRE if SWI is not available.

MRI Brain (with Orbits)

Updated 02/12/20

Reviewed 05/14/25

Use orbits field-of-view (FOV) and angulations as in the images below.

Notify a Radiologist if there is a brain abnormality to see if additional sequences are needed.

Go to MRIMaster.com for a guide of proper positioning.

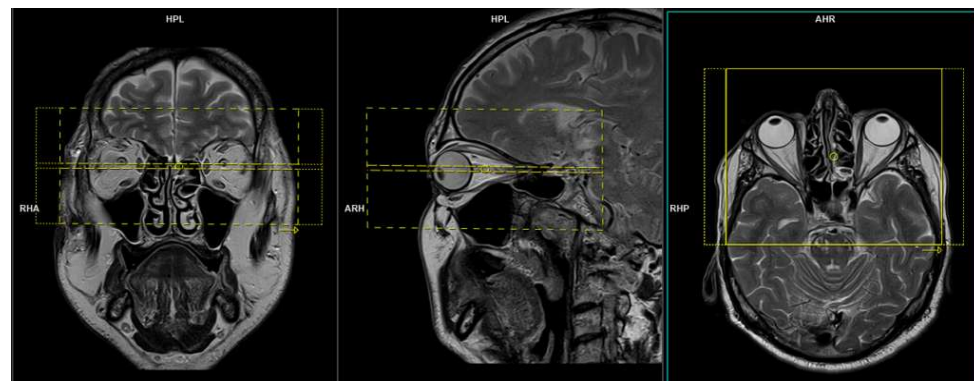
Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice	Field of View
T1	T1 SAG	sag	no	5	2	left	whole brain
T2	T2 FS AX	ax	yes	5	1.5	base	
FLAIR	FLAIR AX	ax	no	5	1.5	base	
DWI	DWI AX	ax	yes	5	1.5	base	
T1	T1 COR	cor	no	3	0.5	back	orbits
STIR	STIR COR	cor	no	3	0.5	back	
T2	T2 FS AX	ax	yes	3	0.5	base	
T1	T1 AX	ax	no	3	0.5	base	
T2	T2 SAG	sag	no	3	0.5	base	

CONTRAST - 2 mL/sec standard dose gadolinium (0.2 mL/kg Clariscan or 0.1 mL/kg Gadavist) followed by 20 mL saline flush.

T1	T1 FS POST COR	cor	yes	3	0.5	back	orbits
T1	T1 FS POST AX	ax	yes	3	0.5	base	
T1	T1 POST AX	ax	no	5	1.5	base	whole brain



coronal FOV and angulation (parallel to the optic nerves in the axial plane)



axial FOV and angulation (parallel to the optic nerves in the coronal plane)

MRI Brain (for Seizure)

Updated 11/19/23

Reviewed 05/14/25

Use temporal lobes field-of-view (FOV) and angulations as in the images below.

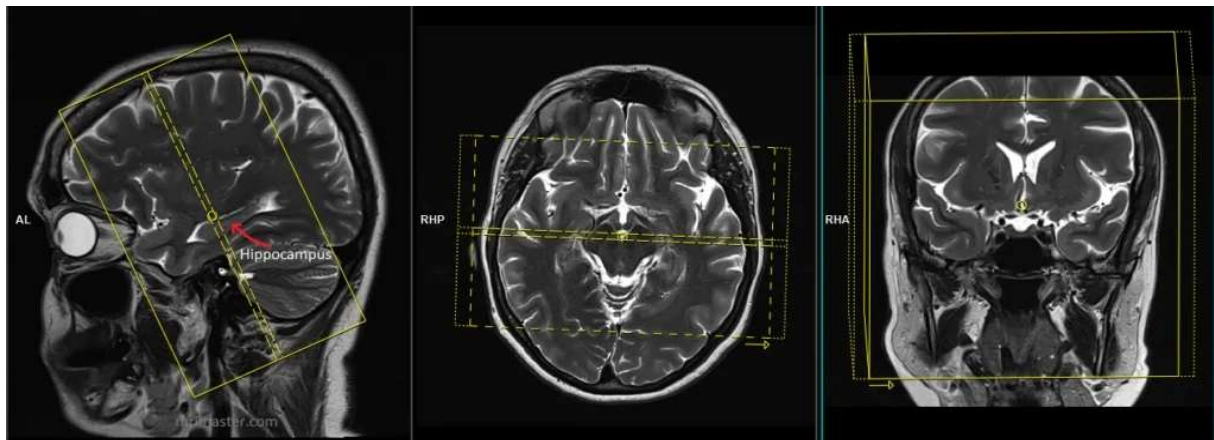
Go to MRIMaster.com for a guide of proper positioning.

Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice	Field of View
T1	T1 SAG	sag	no	5	2	left	whole brain
T2	T2 FS AX	ax	yes	5	1.5	base	
T1	T1 AX	ax	no	5	1.5	base	
FLAIR	FLAIR AX	ax	no	5	1.5	base	
*SWI	SWI AX	ax	no	5	1.5	base	
DWI	DWI AX	ax	yes	5	1.5	base	
T2	T2 COR THINS	cor	no	3	0.2	back	temporal lobes
FLAIR	FLAIR COR THINS	cor	no	3	0.5	back	

CONTRAST - 2 mL/sec standard dose gadolinium (0.2 mL/kg Clariscan or 0.1 mL/kg Gadavist) followed by 20 mL saline flush.

T1	T1 POST AX	ax	no	5	1.5	base	whole brain
T1	T1 POST COR	cor	no	5	1.5	back	

*GRE if SWI is not available.



coronal FOV and angulation (perpendicular to the long axis of the hippocampus in the sagittal plane)

Temporal lobe coronal plane is perpendicular to the long axis of the hippocampus on sagittal images and perpendicular to the midline on coronal images (see image below).

Cover the entire temporal lobes front to back.

MRI Brain (for Multiple Sclerosis)

Updated 11/15/22

Reviewed 05/14/25

Use orbits field-of-view (FOV) and angulations as in the images below.

Go to MRIMaster.com for a guide of proper positioning.

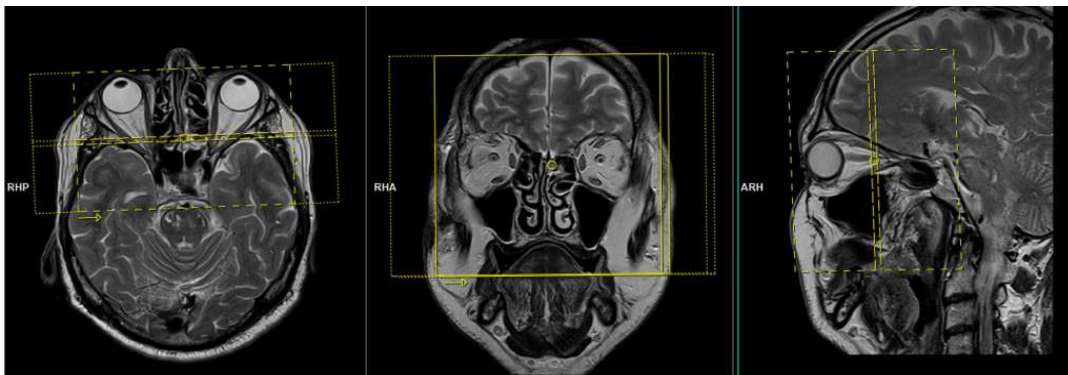
Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice	Field of View
T1	T1 SAG	sag	no	5	2	left	whole brain
*T2 FLAIR CUBE	FLAIR SAG	sag	yes	1.4	none	base	
T2	T2 FS AX	ax	yes	5	1.5	base	
T1	T1 AX	ax	no	5	1.5	base	
FLAIR	FLAIR AX	ax	no	5	1.5	base	
**SWI	SWI AX	ax	no	5	1.5	base	
DWI	DWI AX	ax	yes	5	1.5	base	

CONTRAST - 2 mL/sec standard dose gadolinium (0.2 mL/kg Clariscan or 0.1 mL/kg Gadavist) followed by 20 mL saline flush.

T1	T1 POST AX	ax	no	5	1.5	base	whole brain
T1	T1 POST COR	cor	no	5	1.5	back	
T1	T1 FS POST ORBITS	cor	yes	3	0.5	back	orbits

*Sagittal FLAIR 3 mm thick 0.5 mm gap if FLAIR CUBE sequence is not available.

**GRE if SWI is not available.



coronal FOV and angulation (parallel to the optic nerves in the axial plane)

MRA Head (Circle of Willis)

Updated 11/15/22

Reviewed 05/14/25

MRA without IV contrast is the preferred exam for COW evaluation (as opposed to without and with). Check with a Radiologist before performing without and with unless the exam was ordered by a Neurologist.

WITHOUT ONLY:

Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice
3D TOF	3D TOF AX	ax	yes	0.7	0.1	base

RECONS:

horizontal and vertical MIP spinners

WITHOUT & WITH:

Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice
3D TOF	3D TOF AX	ax	yes	0.7	0.1	base
3D T1	3D T1 PRE SAG	sag	no	1	0.2	left

CONTRAST - 2 mL/sec standard dose gadolinium (0.2 mL/kg Clariscan or 0.1 mL/kg Gadavist) followed by 20 mL saline flush.

3D T1	3D T1 POST SAG	sag	no	1	0.2	left
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RECONS:

sagittal subtractions

horizontal and vertical MIP spinners of both the TOF and post contrast sequences

MRA Neck (Carotids)

Updated 11/15/22

Reviewed 05/14/25

WITHOUT ONLY:

Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice
2D TOF	2D TOF AX	ax	no	3	0.9	base

RECONS:

horizontal MIP spinners of both carotids together and each separately

WITHOUT & WITH:

Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice
2D TOF	2D TOF AX	ax	no	3	0.9	base
3D T1	3D T1 PRE COR	cor	no	1	0.2	back

CONTRAST - 2 mL/sec standard dose gadolinium (0.2 mL/kg Clariscan or 0.1 mL/kg Gadavist) followed by 20 mL saline flush.

3D T1	3D T1 PRE COR	cor	no	1	0.2	back
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RECONS:

coronal subtractions

horizontal MIP spinners of both carotids together on the TOF sequence

horizontal MIP spinners of both carotids together and each separately on the post contrast sequence

MRI Head Venogram

Updated 05/07/25

Reviewed 05/14/25

This exam is only performed at Riverside hospital.

Riverside Protocol:

Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice
3D Vel MRV T2	T2 SAG	sag	no	1.4	none	left
3D Vel MRV T1	T1 SAG	sag	no	1.4	none	left
T2	T2 SAG	sag	no	3	0.5	left
3D T1	3D T1 PRE SAG	sag	no	2	none	left

CONTRAST - 2 mL/sec standard dose gadolinium (0.2 mL/kg Clariscan or 0.1 mL/kg Gadavist) followed by 20 mL saline flush.

3D T1	3D T1 PRE SAG 1	sag	no	2	none	left
3D T1	3D T1 PRE SAG 2	sag	no	2	none	left
3D T1	3D T1 PRE SAG 3	sag	no	2	none	left
*3D T1 FSPGR/MPRAGE	AX THINS	ax	no	1	none	base

RECONS:

subtractions of all 3 post contrast sequences

horizontal and vertical MIP spinners of the 1st and 2nd post contrast sequences

Other Sites Protocol:

Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice
3D T1	3D T1 PRE SAG	sag	no	0.9	1	left

CONTRAST - 2 mL/sec standard dose gadolinium (0.2 mL/kg Clariscan or 0.1 mL/kg Gadavist) followed by 20 mL saline flush.

3D T1	3D T1 PRE SAG 1	sag	no	0.9	1	left
3D T1	3D T1 PRE SAG 2	sag	no	0.9	1	left
*3D T1 FSPGR/MPRAGE	AX THINS	ax	no	1	none	base
T2	T2 COR	cor	no	3	0.5	back

RECONS:

subtractions of both post contrast sequences

horizontal and vertical MIP spinners of both post contrast sequences

MRI Pituitary

Updated 10/18/23

Reviewed 05/14/25

Use pituitary field-of-view (FOV) and angulations as in the images below.

Notify a Radiologist if there is a brain abnormality to see if additional sequences are needed.

Go to MRIMaster.com for a guide of proper positioning.

Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice	Field of View
T1	T1 SAG	sag	no	4	1	left	whole brain
T1	T1 PIT SAG	sag	no	3	0	left	pituitary
T1	T1 PIT COR	cor	no	3	0	left	
T2	T2 FS PIT COR	cor	yes	3	0	back	

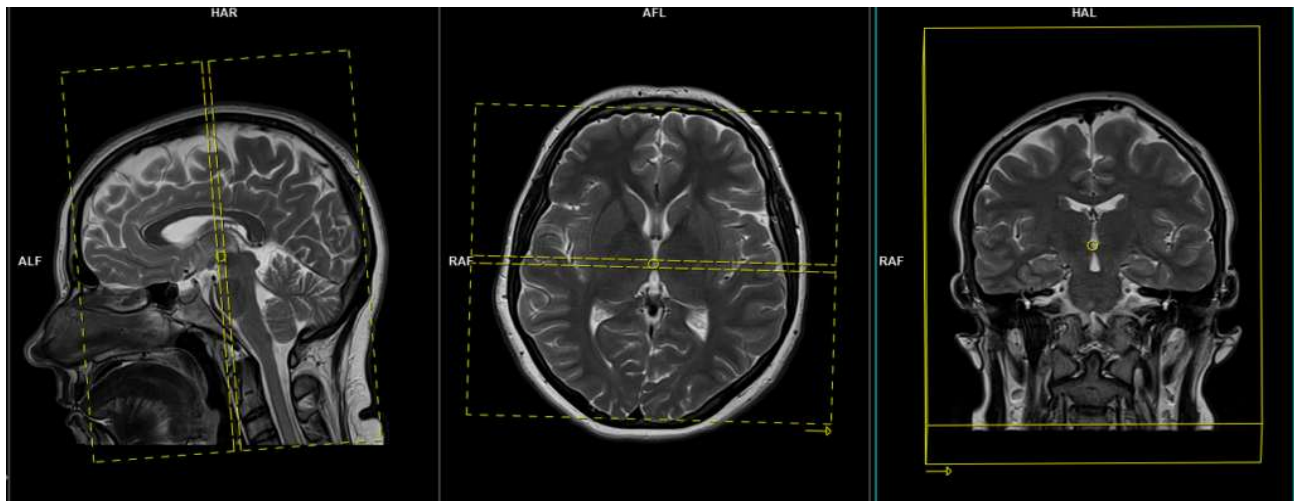
CONTRAST - 2 mL/sec standard dose gadolinium (0.2 mL/kg Clariscan or 0.1 mL/kg Gadavist) followed by 20 mL saline flush.

*T1	T1 DYNAMIC	cor	no	3	0	back	pituitary
T1	T1 FS POST SAG	sag	yes	3	0	left	
T1	T1 FS POST COR	cor	yes	3	0	back	
T1	T1 POST AX	ax	no	5	1.5	base	whole brain

*Do dynamic post contrast images in patients with microadenoma (unknown or follow-up), abnormal hormone levels, elevated prolactin level and pituitary bleed/hemorrhage.

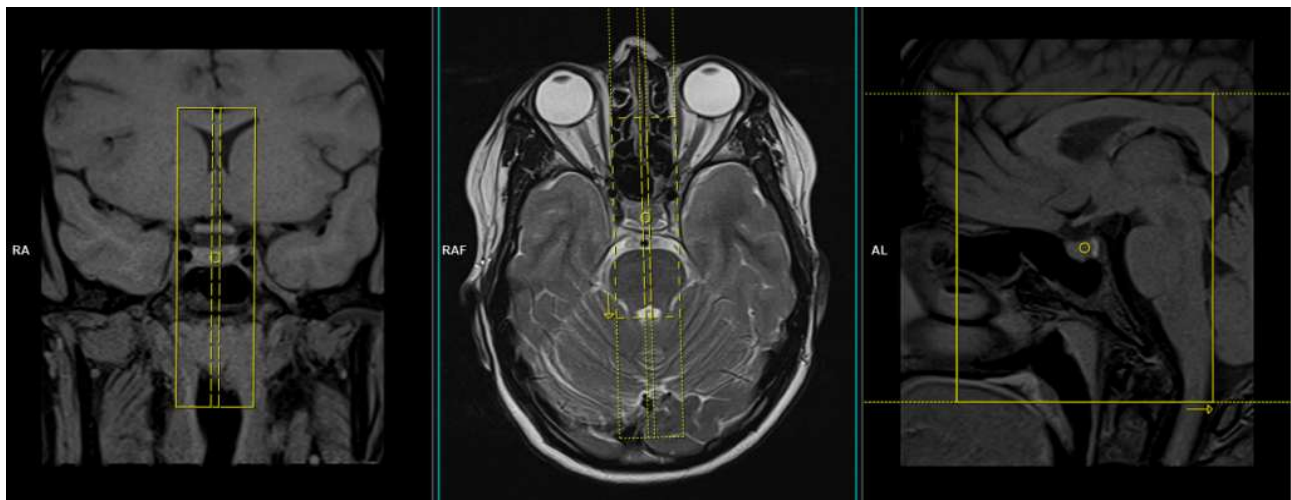
For all other indications, omit the dynamic sequences and hand inject.

Ask a Radiologist if you are unsure whether to do dynamic post contrast imaging or hand injection.



coronal FOV and angulation (perpendicular to the sella turcica in the sagittal plane)

MRI Pituitary



sagittal FOV and angulation (parallel to the midline of the brain in the axial plane)

MRI Paranasal Sinuses

Updated 11/22/23

Reviewed 05/14/25

Notify a Radiologist if a brain abnormality is present to determine the need for additional sequences.

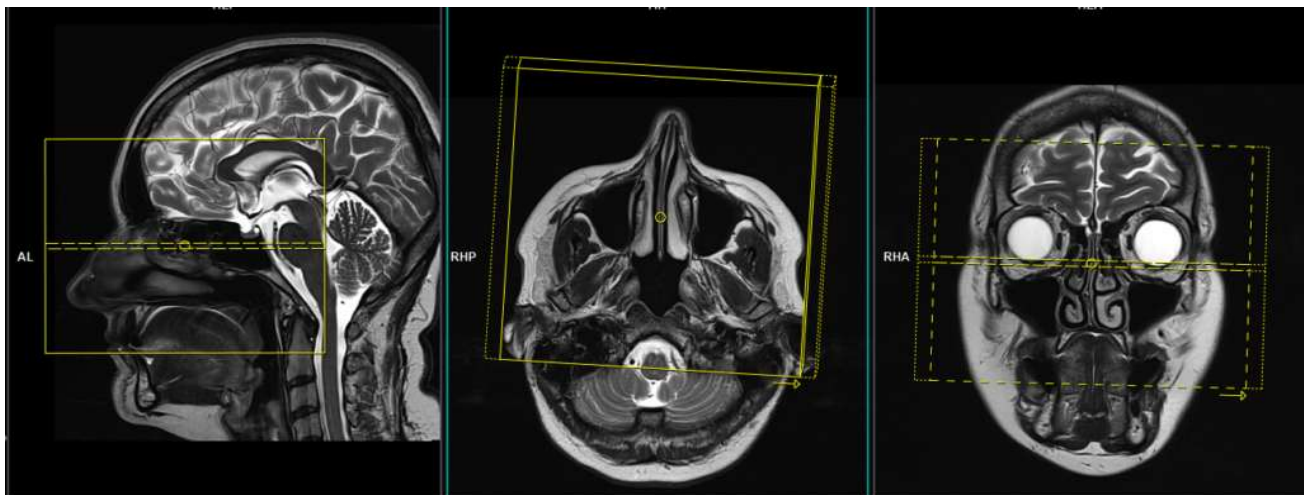
Use sinuses field-of-view (FOV) and angulations as in the images below.

Go to MRIMaster.com for a guide of proper positioning.

Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice	Field of View
T1	T1 SAG	sag	no	3	0	left	sinuses
T1	T1 AX	ax	no	3	0.9	base	
T1	T1 COR	cor	no	3	0	back	
T2	T2 AX	ax	no	3	0.9	base	
T2	T2 FS COR	cor	yes	3	0	back	

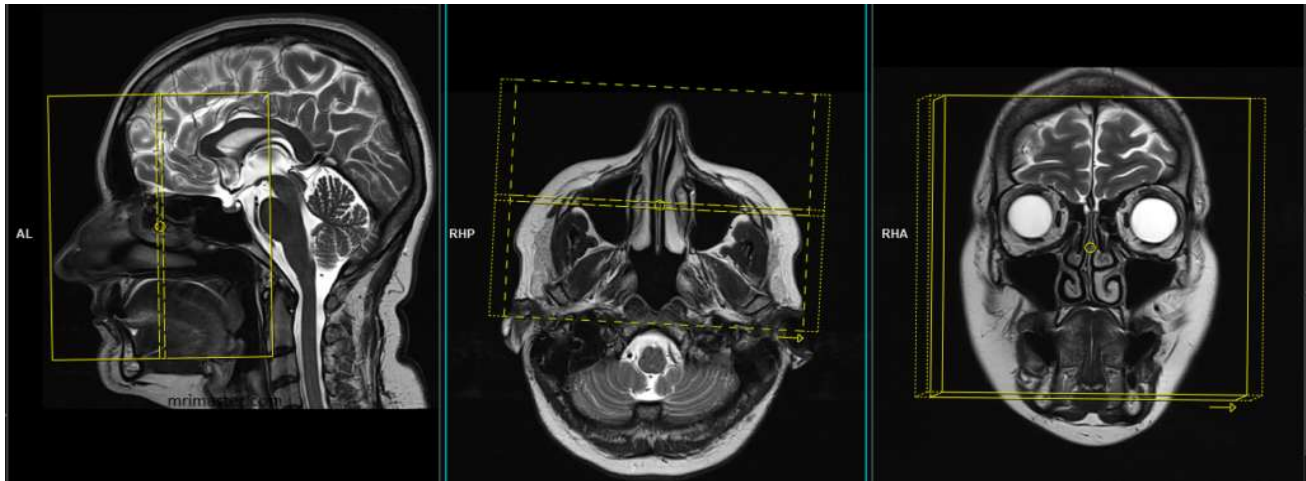
CONTRAST - 2 mL/sec standard dose gadolinium (0.2 mL/kg Clariscan or 0.1 mL/kg Gadavist) followed by 20 mL saline flush.

T1	T1 FS POST AX	ax	yes	3	0.9	base	sinuses
T1	T1 FS POST COR	cor	yes	3	0	back	
T1	T1 POST SAG	sag	no	5	1.5	base	whole brain

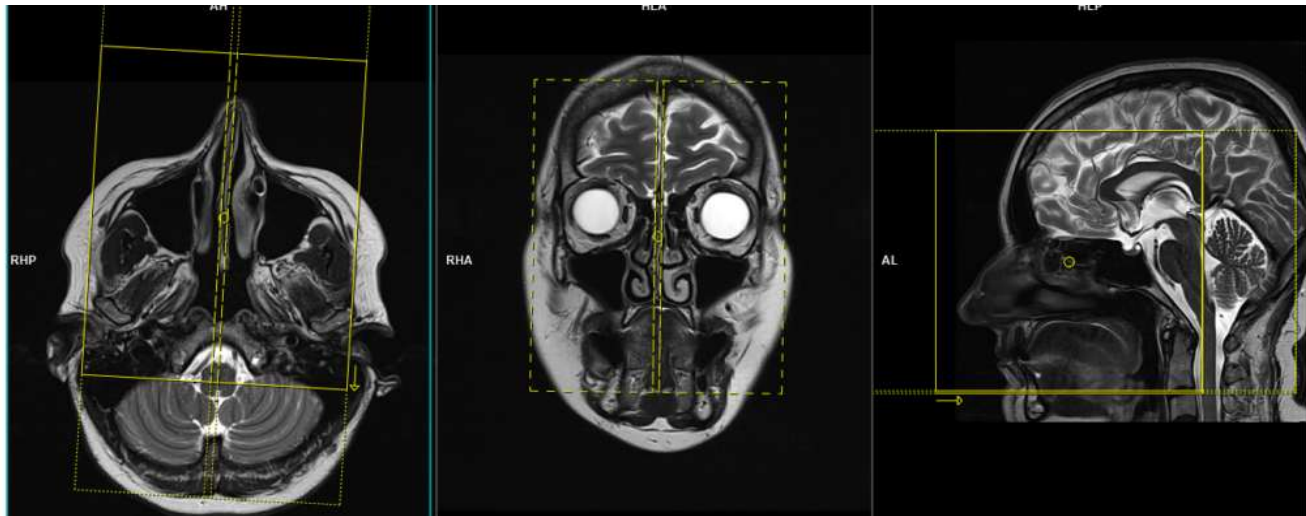


axial FOV and angulation (parallel to the hard palate in the axial plane)

MRI Paranasal Sinuses



coronal FOV and angulation (perpendicular to the hard palate in the sagittal plane)



sagittal FOV and angulation (parallel to the nasal septum in the axial plane)

MRI IACs (Internal Auditory Canals)

Updated 03/22/25

Reviewed 05/14/25

Use IACs field-of-view (FOV) and angulations as in the images below.

The matrix for the axial CISS sequence must be squared in order to create coronal CISS reconstructions.

Notify a Radiologist if there is a brain abnormality to see if additional sequences are needed.

Go to MRIMaster.com for a guide of proper positioning.

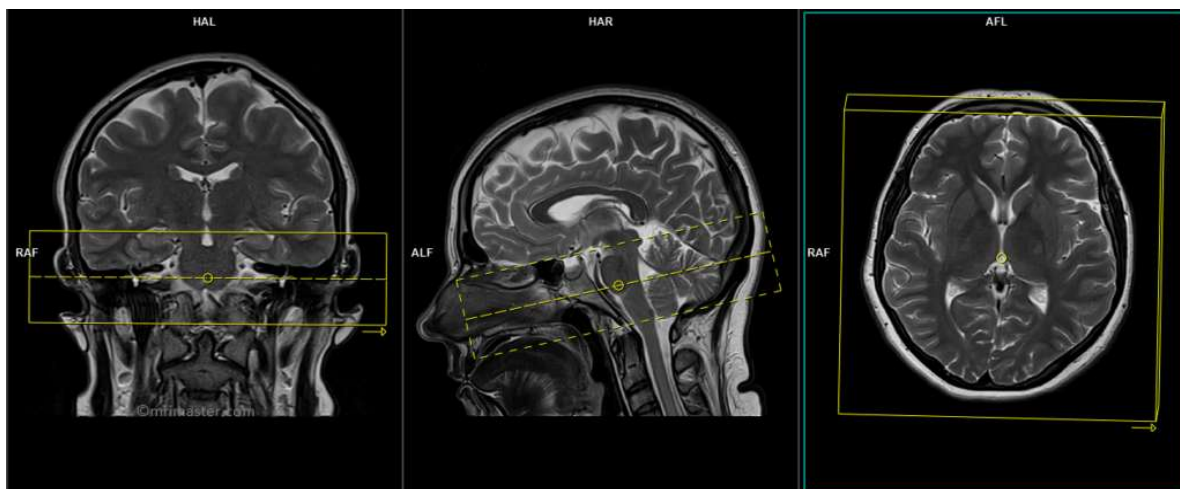
Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice	Field of View
T1	T1 SAG	sag	no	5	2	left	whole brain
FLAIR	FLAIR AX	ax	no	5	1.5	base	
T1	T1 AX	ax	no	3	0	base	IACs
T1	T1 COR	cor	no	3	0	back	
CISS	CISS AX	ax	no	1	0.2	base	

CONTRAST - 2 mL/sec standard dose gadolinium (0.2 mL/kg Clariscan or 0.1 mL/kg Gadavist) followed by 20 mL saline flush.

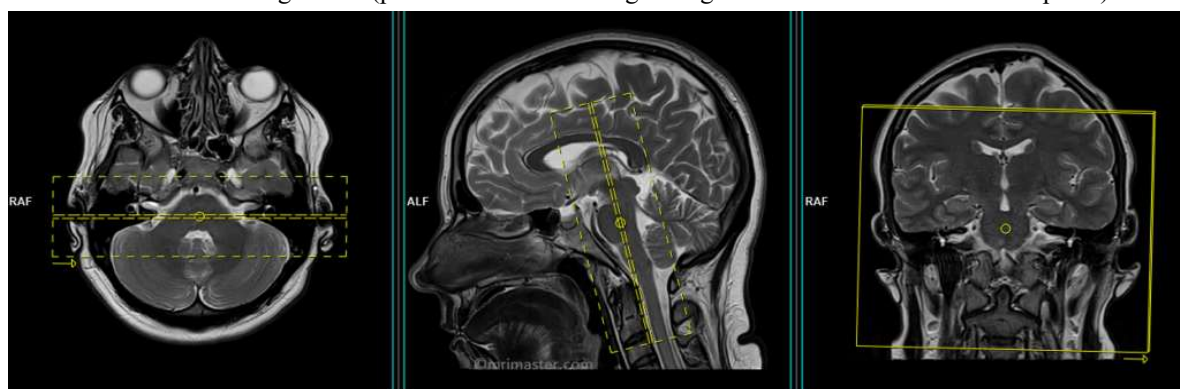
T1	T1 FS POST AX	ax	yes	3	0	base	IACs
T1	T1 FS POST COR	cor	yes	3	0	back	
T1	T1 POST AX	ax	no	5	1.5	base	whole brain

RECONS:

sagittal MPR reconstructions of the axial CISS sequence (1.0 mm thick by 0.2 mm spacing)



axial FOV and angulation (parallel to the line along the right and left IACs in the coronal plane)



coronal FOV and angulation (parallel to the line along the right and left IACs in the axial plane)

MRI Trigeminal Neuralgia

Updated 11/22/23

Reviewed 05/14/25

Ask a Radiologist to determine the skull base field-of-view (FOV).

Go to MRIMaster.com for a guide of proper positioning.

Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice	Field of View
T1	T1 SAG	sag	no	5	2	left	whole brain
FLAIR	FLAIR AX	ax	no	5	1.5	base	
DWI	DWI AX	ax	yes	5	1.5	base	
T1	T1 AX	ax	no	3	0.9	base	skull base
T1	T1 COR	cor	no	3	0	back	
T2	T2 AX	ax	no	3	0.9	base	
T2	T2 FS AX	ax	yes	3	0.9	base	

CONTRAST - 2 mL/sec standard dose gadolinium (0.2 mL/kg Clariscan or 0.1 mL/kg Gadavist) followed by 20 mL saline flush.

T1	T1 FS POST AX	ax	yes	3	0.9	base	skull base
T1	T1 FS POST COR	cor	yes	3	0.9	back	
T1	T1 POST AX	ax	no	5	1.5	base	whole brain

MRI Skull Base

Updated 11/22/23

Reviewed 05/14/25

Ask a Radiologist to determine the skull base field-of-view (FOV).

Go to MRIMaster.com for a guide of proper positioning.

Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice	Field of View
T1	T1 SAG	sag	no	5	2	left	whole brain
FLAIR	FLAIR AX	ax	no	5	1.5	base	
DWI	DWI AX	ax	yes	5	1.5	base	
T1	T1 AX	ax	no	3	0.9	base	skull base
T1	T1 COR	cor	no	3	0	back	
T2	T2 AX	ax	no	3	0.9	base	
T2	T2 FS AX	ax	yes	3	0.9	base	

CONTRAST - 2 mL/sec standard dose gadolinium (0.2 mL/kg Clariscan or 0.1 mL/kg Gadavist) followed by 20 mL saline flush.

T1	T1 FS POST AX	ax	yes	3	0.9	base	skull base
T1	T1 FS POST COR	cor	yes	3	0.9	back	
T1	T1 POST AX	ax	no	5	1.5	base	whole brain

MRI Chiari Flow

Updated 11/22/23

Reviewed 05/14/25

Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice
2D Phase Contrast Cine	2D CINE SAG	sag	no	5	0	left

MRI Neck Soft Tissue

Updated 08/24/24

Reviewed 05/14/25

Remind patient not to swallow during image acquisition to reduce motion artifact.

Go to MRIMaster.com for a guide of proper positioning.

Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice
T1	T1 AX	ax	no	6	1.2	base
T2	T2 FS AX	ax	yes	6	1.2	base
T1	T1 COR	cor	no	5	1	back
T2	T2 FS COR	cor	yes	5	1	back
T1	T1 SAG	sag	no	4	1	left
T2	T2 FS SAG	sag	yes	4	1	left

CONTRAST - 2 mL/sec standard dose gadolinium (0.2 mL/kg Clariscan or 0.1 mL/kg Gadavist) followed by 20 mL saline flush.

T1	T1 POST AX	ax	yes	6	1.2	base
T1	T1 POST COR	cor	yes	5	1	back
T1	T1 POST SAG	sag	yes	4	1	left

MRI Neck Parotid Glands

Updated 01/15/21

Reviewed 05/14/25

Remind patient not to swallow during image acquisition to reduce motion artifact.

Go to MRIMaster.com for a guide of proper positioning.

Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice
T1	T1 AX	ax	no	3	1.2	base
T2	T2 AX	ax	no	3	1.2	base
T2	T2 FS AX	ax	yes	3	1.2	base
T1	T1 COR	cor	no	3	1.2	back
T2	T2 COR	cor	no	3	1.2	back
T2	T2 FS COR	cor	yes	3	1.2	back

CONTRAST - 2 mL/sec standard dose gadolinium (0.2 mL/kg Clariscan or 0.1 mL/kg Gadavist) followed by 20 mL saline flush.

T1	T1 POST AX	ax	yes	3	1.2	base
T1	T1 POST COR	cor	yes	3	1.2	back
T1	T1 POST SAG	sag	yes	3	1.2	left

MRI Cervical Spine

Updated 03/17/20

Reviewed 05/14/25

Increase bandwidth and use IDEAL sequences if available for MARS protocol.

Go to MRIMaster.com for a guide of proper positioning.

Routine Cervical Spine:

Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice
T1	T1 SAG	sag	no	3	0.3	left
T2	T2 SAG	sag	no	3	0.3	left
T2	T2 FS SAG	sag	yes	3	0.3	left
T2 GRE	GRE AX	ax	no	4	0.5	top
T2	T2 FS AX	ax	yes	4	0.5	top

CONTRAST - 2 mL/sec standard dose gadolinium (0.2 mL/kg Clariscan or 0.1 mL/kg Gadavist) followed by 20 mL saline flush.

T1	T1 FS POST SAG	sag	yes	3	0.3	left
T1	T1 FS POST AX	ax	yes	4	0.5	top

MARS (Metal Artifact Reduction):

Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice
T1	T1 SAG	sag	no	3	0.3	left
T2	T2 SAG	sag	no	3	0.3	left
STIR	STIR SAG	sag	no	3	0.3	left
T1	T1 AX	ax	no	4	0.5	top
T2	T2 AX	ax	no	4	0.5	top

CONTRAST - 2 mL/sec standard dose gadolinium (0.2 mL/kg Clariscan or 0.1 mL/kg Gadavist) followed by 20 mL saline flush.

T1	T1 FS POST SAG	sag	yes	3	0.3	left
T1	T1 FS POST AX	ax	yes	4	0.5	top

MRI Thoracic Spine

Updated 05/18/20

Reviewed 05/14/25

Go to MRIMaster.com for a guide of proper positioning.

Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice
T2 HiRes Localizer	Localizer	sag	no	5	0.5	left
T1	T1 SAG	sag	no	4	1	left
T2	T2 SAG	sag	no	4	1	left
*T2	T2 FS SAG	sag	yes	4	1	left
T1	T1 AX	ax	no	4	1	top
T2	T2 AX	ax	no	7	3.5	top

CONTRAST - 2 mL/sec standard dose gadolinium (0.2 mL/kg Clariscan or 0.1 mL/kg Gadavist) followed by 20 mL saline flush.

T1	T1 FS POST SAG	sag	yes	4	1	left
T1	T1 FS POST AX	ax	yes	4	1	top

*Add sagittal STIR (5 mm thick no gap) if sagittal T2 FS has blackout artifact.

MRI Lumbar Spine

Updated 02/02/21

Reviewed 05/14/25

Increase bandwidth and use IDEAL sequences if available for MARS protocol.

Go to MRIMaster.com for a guide of proper positioning.

Routine Lumbar Spine:

Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice
T1	T1 SAG	sag	no	4	1	left
T2	T2 SAG	sag	no	4	1	left
T2	T2 FS SAG	sag	yes	4	1	left
T1	T1 AX	ax	no	5	1	top
T2	T2 DISC AX	ax	no	4	0.8	top
T2	T2 AX	ax	no	5	1	top
T2	T2 FS AX	ax	yes	5	1	top

CONTRAST - 2 mL/sec standard dose gadolinium (0.2 mL/kg Clariscan or 0.1 mL/kg Gadavist) followed by 20 mL saline flush.

T1	T1 FS SAG	sag	yes	4	1	left
T1	T1 FS AX	ax	yes	5	1	top

MARS (Metal Artifact Reduction):

Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice
T1	T1 SAG	sag	no	4	1	left
T2	T2 SAG	sag	no	4	1	left
STIR	STIR SAG	sag	no	4	1	left
T1	T1 AX	ax	no	4	1	top
T2	T2 DISC AX	ax	no	4	0.8	top
T2	T2 AX	ax	no	4	1	top
STIR	STIR AX	ax	no	5	1	top

CONTRAST - 2 mL/sec standard dose gadolinium (0.2 mL/kg Clariscan or 0.1 mL/kg Gadavist) followed by 20 mL saline flush.

T1	T1 POST SAG	sag	no	4	1	left
T1	T1 FS POST SAG	sag	yes	4	1	left
T1	T1 POST AX	ax	no	4	1	top

RECONS: (for MARS)

sagittal and axial subtractions

MRI Entire Spine

Updated 07/17/17

Reviewed 05/14/25

Indications: acute trauma, cord compression.

This protocol must be approved by a Radiologist.

IV contrast is not given for this protocol.

Go to MRIMaster.com for a guide of proper positioning.

Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice	Field of View
T1	T1 SAG CERVICAL	sag	no	4	0.6	left	cervical spine
T2	T2 FS SAG CERVICAL	sag	yes	4	0.6	left	
T1	T1 SAG THORACIC	sag	no	4	0.6	left	thoracic spine
T2	T2 FS SAG THORACIC	sag	yes	4	0.6	left	
T1	T1 SAG LUMBAR	sag	no	4	0.6	left	lumbar spine
T2	T2 FS SAG LUMBAR	sag	yes	4	0.6	left	
*T2	T2 AX CERVICAL	ax	no	3	1	top	cervical spine
*T2	T2 AX THORACIC	ax	no	7	3.5	top	thoracic spine
*T2	T2 AX LUMBAR	ax	no	5	1	top	lumbar spine

*Axial T2 sequences are optional.

MRI TMJs (Temporomandibular Joints)

Updated 11/22/23

Reviewed 05/14/25

IV contrast is not given for this protocol.

Go to MRIMaster.com for a guide of proper positioning.

Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice
T1	T1 SAG CLOSED	sag	no	3	0.3	left
T1	T1 SAG OPEN	sag	no	3	0.3	left
T2	T2 FS COR CLOSED	cor	yes	3	0.3	back
T2	T2 FS AX CLOSED	cor	yes	3	0.3	base
Gradient Cine	GRE SAG RIGHT	sag	no	4	0.3	left
Gradient Cine	GRE SAG LEFT	sag	no	4	0.3	left

MRI Brachial Plexus

Updated 11/19/23

Reviewed 05/14/25

Use brachial plexus field-of-view (FOV) and angulations as in the images below.

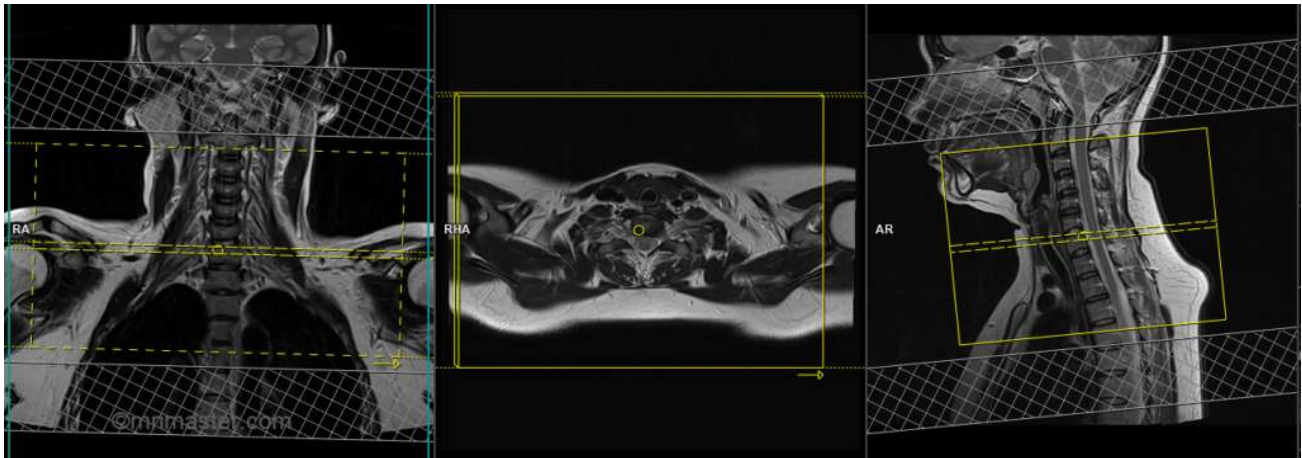
Go to MRIMaster.com for a guide of proper positioning.

Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice
T1	T1 COR BILAT	cor	no	5	1.5	back
STIR	STIR COR BILAT	cor	no	5	1.5	back
STIR	STIR AX BILAT	ax	no	5	2.5	base
T1	T1 AX RIGHT	ax	no	5	2.5	base
T1	T1 AX LEFT	ax	no	5	2.5	base
T1	T1 SAG RIGHT	sag	no	5	2.5	left
T1	T1 SAG LEFT	sag	no	5	2.5	left

CONTRAST - 2 mL/sec standard dose gadolinium (0.2 mL/kg Clariscan or 0.1 mL/kg Gadavist) followed by 20 mL saline flush.

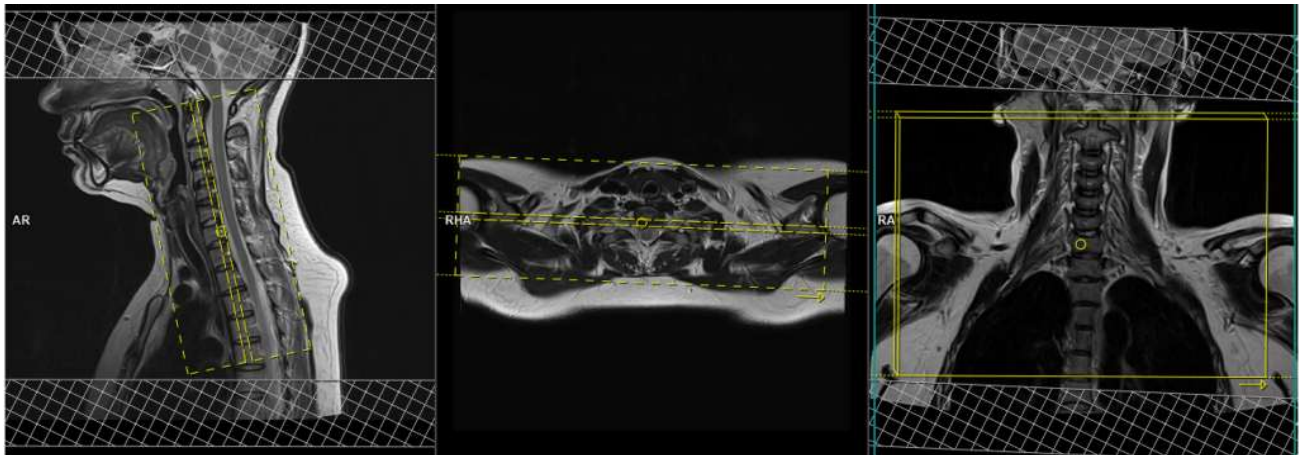
T1	T1 FS POST AX	ax	yes	5	1.5	base
T1	T1 FS POST COR	cor	yes	5	2.5	back
T1	T1 FS POST SAG	sag	yes	5	2.5	left

*All post contrast sequences are only of the symptomatic side.

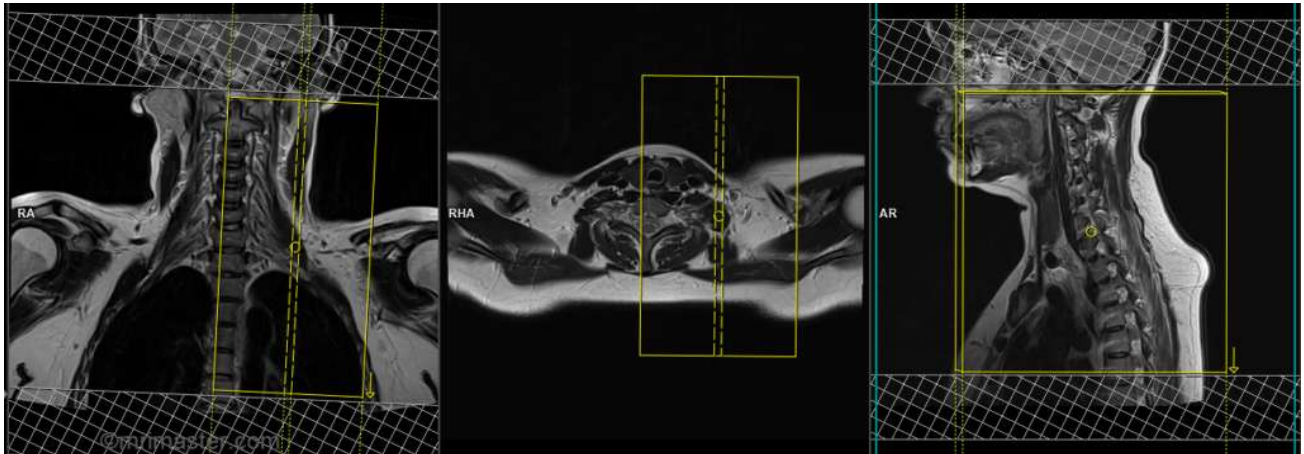


axial FOV & angulation (perpendicular to the spinal cord in the sagittal plane)

MRI Brachial Plexus



coronal FOV & angulation (parallel to the spinal cord in the sagittal plane)



sagittal FOV & angulation (parallel to the spinal cord in the coronal plane)

MRI Lumbar Plexus

Updated 11/19/23

Reviewed 05/14/25

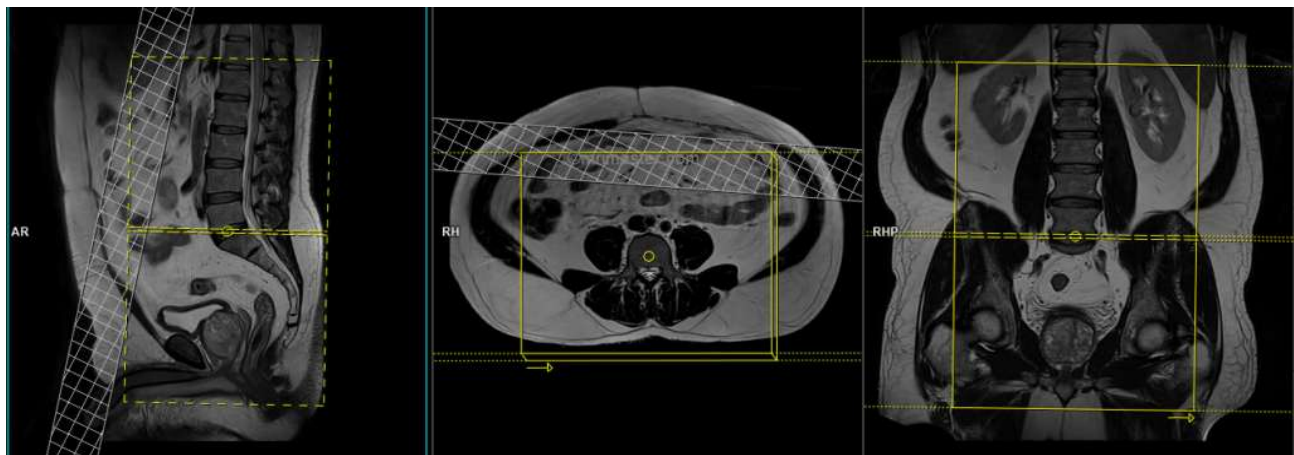
Use lumbar plexus field-of-view (FOV) and angulations as in the images below.

Go to MRIMaster.com for a guide of proper positioning.

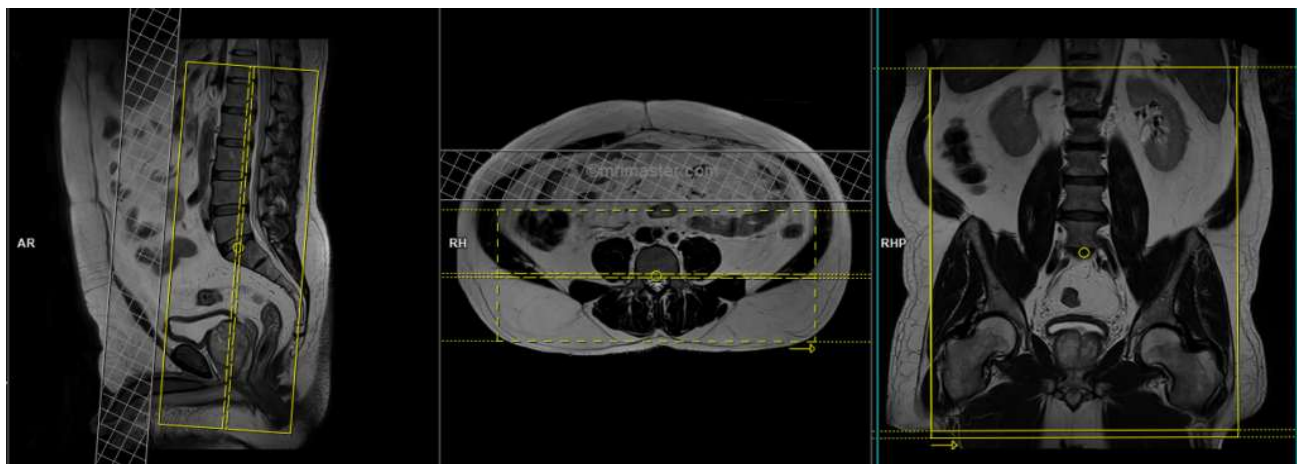
Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice
T1	T1 AX	ax	no	6	1.2	base
T1	T1 COR	cor	no	5	1	back
T2	T2 FS AX	ax	yes	6	1.2	base
T2	T2 FS COR	cor	yes	5	1	back
T2	T2 SAG	sag	no	6	1.2	left

CONTRAST - 2 mL/sec standard dose gadolinium (0.2 mL/kg Clariscan or 0.1 mL/kg Gadavist) followed by 20 mL saline flush.

T1	T1 FS POST AX	ax	yes	6	1.2	base
T1	T1 FS POST COR	cor	yes	5	1	back

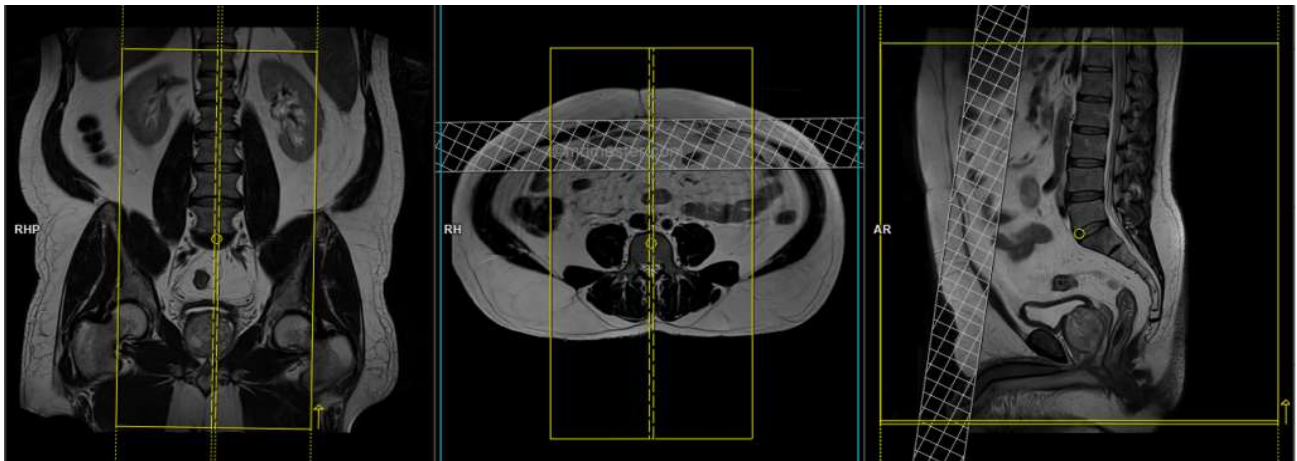


axial FOV & angulation (perpendicular to the spinal cord in the sagittal plane)



coronal FOV & angulation (parallel to the spinal cord in the sagittal plane)

MRI Lumbar Plexus



sagittal FOV & angulation (parallel to the spinal cord in the coronal plane)