

**PROTOCOL: MRI CERVICAL SPINE WWO-ROUTINE**

**CLINICAL INDICATIONS/ HISTORY** Pain, stenosis, radiculopathy, trauma, disc disease, cord injury, epidural hemtoma, surgery / post-op

**TIPS:** Hospitals should be using STIR + T2, NOT T2 DIXON fat suppression techniques.  
Axial T2 to be angled parallel to discs.  
If metal hardware, scan on 1.5T magnet rather than 3T magnet  
3D T2 CUBE discouraged since it is not helpful in evaluating cord lesions and causes artifact evaluating neural foramina.

SCAN ORDER	PLANE	IMAGE CONTRAST/		PULSE SEQ	COVERAGE		TR	TE	TI	FLIP	THICKNESS/G	Max Pixel		PHASE AXIS	SEND TO PACS	Max scan time (target)
		WEIGHTING	MODE		RANGE	RANGE	ANGLE	AP (mm)		FOV (cm)	x Ph	Fr				
1	SAG	T1	2D	FSE	COVER BONY CERVICAL SPINE		<790	MIN	-	>130	3/1	18-20	.9X.9	SI	FULL SERIES	3:00
2	SAG	T2	2D	FSE	COVER BONY CERVICAL SPINE		4000-7000	90-110	-	>130	3/1	18-20	.9X.9	SI	FULL SERIES	3:00
3	SAG	STIR	2D	FSE	COVER BONY CERVICAL SPINE		3000-6000	50-70	150	>130	3/1	18-20	1.0X1.0	SI	FULL SERIES	4:00
4	AX	T2*	2D	MEDIC/ MERGE	BOTTOM C2	TOP T1	SINGLE ACQ	20-24	-	20-25	3/1	14-16	1.0X1.0	PA	FULL SERIES	5:45
5	AX	T2	2D	FSE	FORAMEN MAGNUM	TOP T1	4000-7000	90-110	-	>130	3/1	14-16	1.0X1.0	PA	FULL SERIES	4:00
IF CONTRAST ORDERED																
6+C	SAG	T1 DIXON (FS)	2D	FSE	COVER BONY CERVICAL SPINE		<790	MIN		>130	3/1	18-20	.9X1.0	SI	IN-PHASE AND WATER ONLY	4:30
7+C	AX	T1 DIXON (FS)	3D	VIBE DIXON/ LAVA FLEX	AT LEAST MID C2 THRU MID T1		MIN	IN-PHASE	-	15-25	2/0	14-18	.9X.9	PA	IN-PHASE AND WATER ONLY	4:00
OPTIONAL SEQUENCES AS NEEDED																
* (IF SCOLIOSIS)	COR	T2	2D	FSE	COVER BONY CERVICAL SPINE		4000-7000	90-110	-	>130	4/0	20-22	.8X.8	RL	FULL SERIES	3:00
* (IF TRAUMA)	SAG	T2*	2D	MEDIC/ MERGE	COVER BONY CERVICAL SPINE		SINGLE ACQ	20-24		20-25	3/1	20-22	1.0X1.0	SI	FULL SERIES	4:30
* (IF BONE METS, INFECTION, CORD INFARCT, HEMORRHAGE)	SAG	DWI (b600)	2D	RESOLVE/ FOCUS (EPI IF N/A)	COVER CORD COMPLETELY		>4000	MIN		90	3-4/0	20-26	2.5X2.5	AP	FULL SERIES + ADC MAP	5:00