

PROTOCOL: MRI LUMBAR SPINE WWO-ROUTINE

CLINICAL INDICATIONS/ HISTORY METS, POST-OP EVAL, TUMOR. INFECTION, OSTEOMYELITIS

TIPS: Localizer not optional; should include skull base to as far down as FOV allows to let radiologist count vertebral levels.
 For scoliosis, add a coronal T2.
 Hospitals should be using STIR + T2, NOT T2 DIXON fat suppression techniques.
 If metal hardware, scan on 1.5T magnet rather than 3T magnet:
 If metal hardware and fat-suppression obscures canal, then skip fat suppression on post contrast scans.
 If metal hardware, scan on 1.5T magnet with metal suppression techniques (extended bandwidth or echo train; metal suppression software like MARS or MAVRIC or WARP), DIXON, or IDEAL. If those no available, skip fat suppression
 contrast images should have fat saturation unless hardware artifact is so great that it makes them non-diagnostic

SCAN ORDER	PLANE	IMAGE CONTRAST/WEIGHTING	MODE	PULSE SEQ	COVERAGE	TR RANGE	TE RANGE	TI	FLIP ANGLE	THICKNESS/G AP (mm)	FOV (cm)	Max Pixel (mm) Fr x Ph	PHASE AXIS	SEND TO PACS	Max scan time (target)
1	SAG	T1	2D	FSE	COVER BONY LUMBAR SPINE	<790	MIN	-	>130	4/1	24-26	.9X.9	IS	FULL SERIES	3:00
2	SAG	T2	2D	FSE		4000-7000	90-110	-	>130	4/1	24-26	.9X.9	IS	FULL SERIES	3:00
3	SAG	STIR	2D	FSE		3000-6000	50-70	150	>130	4/1	24-26	1.0X1.0	IS	FULL SERIES	3:30
2/3A (ISJ alternate)	SAG	T2 DIXON/IDEAL	2D	FSE		4000-7000	90-110	-	>130	4/1	24-26	.9X.9	IS	IN-PHASE AND WATER ONLY	4:30
4	AX	T2	2D	FSE	LOWER THIRD OF T12 THRU ALL OF S1	4000-7000	90-110	-	>130	4/1	14-16	1.0X1.0	PA	FULL SERIES	3:30
5	AX	T1	2D	FSE		<790	MIN	-	>130	3.5/1	14-16	1.0X1.0	PA	FULL SERIES	3:00
CONTRAST															
6+C	SAG	T1 FS	2D	FSE	COVER BONY LUMBAR SPINE	<790	MIN	-	>130	4/1	24-26	1.0X1.0	IS	FULL SERIES	4:00
7+C	AX	T1 FS	3D	VIBE DIXON/LAVA FLEX	LOWER THIRD OF T12 THRU ALL OF S1	MIN	IN-PHASE	-	15-25	2/OVLP	14-18	.7X.9	PA	IN-PHASE AND WATER ONLY	4:00
7+C (ALTERNATE)	AX	T1 FS	2D	FSE	LOWER THIRD OF T12 THRU ALL OF S1	<790	MIN	-	>130	4/1	14-18	.8X.9	PA	FULL SERIES	4:00
* (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