

PROTOCOL: MRI SPINE CSF LEAK WO

CLINICAL INDICATIONS/HISTORY cerebrospinal fluid leak, intracranial hypotension
 * This study designed to be targeted to answer the question of leak vs. no leak at the expense of diagnosing other spine conditions. *

TIPS:
 -if not using CISS, for sag 3D T2 then add fat suppression if at all possible.
 -sag T1 should NOT have fat suppression.
 -use a three-station split.
 -Some imaging centers will include brain + spine, but our patients usually already have standard brain -imaging by the time an MD reaches for the MR CSF leak study.
 -no gadolinium because steady-state T2 has been shown to be equivalent to intrathecal gadolinium studies
 -ISJ Aurora will be the primary site to run study because it's convenient to CSF leak clinic at TMCA.
 -If option to run on Siemens or GE, favor Siemens machine

SCAN ORDER	PLANE	IMAGE CONTRAST/WEIGHTING	MODE	PULSE SEQ	COVERAGE	TR RANGE	TE RANGE	TI	FLIP ANGLE	THICKNESS/GAP (mm)	FOV (cm)	Max Pixel (mm) Fr x Ph	PHASE AXIS	SEND TO PACS	Max scan time (target)
1 (up)	SAG	T2	3D	CISS (SIEMENS) / COSMIC / T2 SE-FSE-TSE FS	COMPLETELY COVER TRANSVERSE PROCESSES	5-6	2.3-2.6	-	41-48	0.7-0.9 mm / ovlp	20-24	0.9 x 0.9	SI	FULL SERIES + AX / COR 1 mm	6 min
2 (mid)	SAG	T2	3D	CISS (SIEMENS) / COSMIC / T2 SE-FSE-TSE FS	COMPLETELY COVER TRANSVERSE PROCESSES	5-6	2.3-2.6	-	41-48	0.7-0.9 mm / ovlp	30-33	0.9 x 0.9	SI	FULL SERIES + AX / COR 1 mm	6 min
3 (low)	SAG	T2	3D	CISS (SIEMENS) / COSMIC / T2 SE-FSE-TSE FS	COMPLETELY COVER TRANSVERSE PROCESSES	5-6	2.3-2.6	-	41-48	0.7-0.9 mm / ovlp	26-28	0.9 x 0.9	SI	FULL SERIES + AX / COR 1 mm	6 min
2 (upper)	SAG	T1	2D	FSE	FORAMEN TO FORAMEN	350-799	MIN	-	>130	3/.3	22	0.9 x 0.9	SI	FULL SERIES	3 min
3 (mid)	SAG	T1	2D	FSE	FORAMEN TO FORAMEN	350-799	MIN	-	>131	3/.3	32	0.9 x 0.9	SI	FULL SERIES	3 min
4 (low)	SAG	T1	2D	FSE	FORAMEN TO FORAMEN	350-799	MIN	-	>132	3/.3	26	0.9 x 0.9	SI	FULL SERIES	3 min