

Table 4. Standardized I-SPY 2 and ACRIN 6698 MRI Acquisition Parameters

Parameter	T2-weighted	DWI	T1-weighted
Sequence type	FSE or STIR	DW SE-EPI	GE
2D or 3D sequence	2D	2D	3D
Slice orientation	Axial or sagittal	Axial	Axial
Laterality	Bilateral	Bilateral	Bilateral
Frequency direction	A/P	A/P	A/P
Phase direction	R/L (axial) S/I (sagittal)	R/L	R/L
FOV - frequency	260-360 mm (axial) 180-220 mm (sagittal)	260-360 mm ^(a)	260-360 mm
FOV - phase	300-360 mm (axial) 180-220 mm (sagittal)	300-360 mm ^(a)	300-360 mm
Matrix - frequency (acquired)	256-512	128-192	384-512
Matrix - phase (acquired)	≥ 256	128-192	≥ 256
Reconstruction Matrix	512 x 512	256 x 256	512 x 512
In-plane resolution	≤ 1.4 mm	1.7 - 2.8 mm	≤ 1.4 mm
Fat-suppression	Active fat-sat recommended	Active fat-sat	Active fat-sat recommended
TR	2000-10000 ms	≥ 4,000 ms	4-10 ms
TE	70-140 ms (STIR 70 ms)	Minimum (50-100ms)	Minimum (fat/water in-phase preferable)
Echo Train Length	≤ 16	N/A	N/A
TI (STIR sequence)	170 ms (1.5T) 230 ms (3.0T)	N/A	N/A
Flip Angle	90 degrees	90 degrees	10-20 degrees
Readout Bandwidth (per pixel)	N/A	N/A	Maximum
b values	N/A	0, 100, 600, 800 s/mm ²	N/A
Slice thickness (acquired)	≤ 4 mm	4-5 mm	≤ 2.5 mm
# of slices	Variable; complete bilateral coverage	Variable; bilateral coverage; adjust to keep w/in single acquisition	≥ 60; complete bilateral coverage
Slice Gap	≤ 1.0 mm	No gap	No gap
Parallel imaging factor	≤ 2	≥ 2	≤ 2
# of excitations/averages	≤ 2	≥ 2	≤ 2
k-space ordering	N/A	N/A	-k to +k standard, non-centric
Sequence acquisition time	≤ 7 minutes	4-6 minutes (multi-b seq ~ 5 min)	80 sec ≤ scan time ≤ 100 sec
Total post-contrast imaging duration	N/A	N/A	≥ 8 minutes following injection

(a) Adjust up to 400 mm to accommodate for large body habitus if necessary.