Copyright © by The Journal of Bone and Joint Surgery, Incorporated

http://dx.doi.org/10.2106/JBJS.L.01195



Fig. E-1A

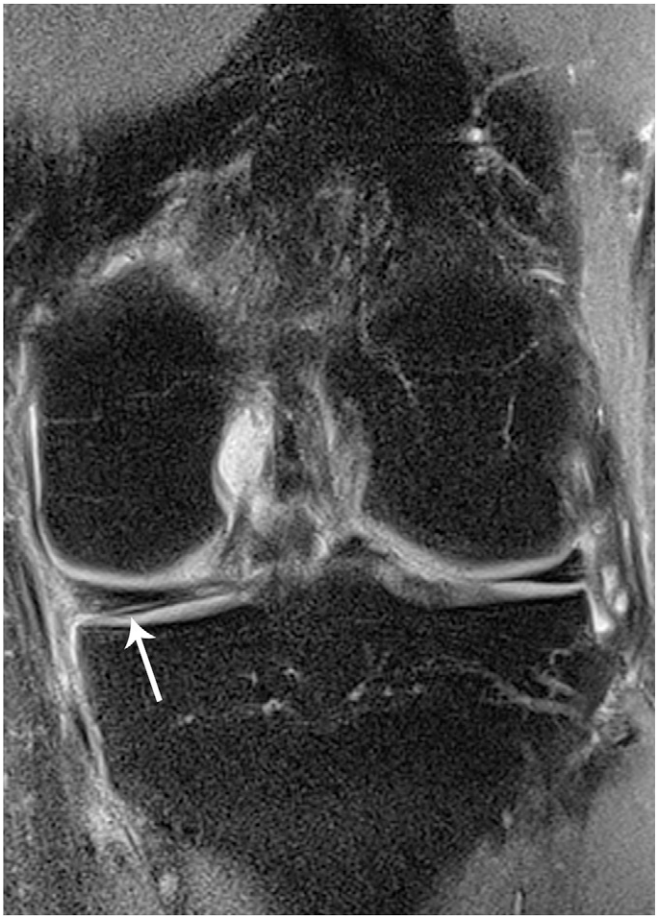


Fig. E-1B

Coronal fat-suppressed intermediate-weighted MR images of the knee of a fifty-year-old man with a surgically confirmed tear in the posterior horn of the medial meniscus. Hyperintense signal is visible in the posterior horn of the medial meniscus (arrow). The tear was missed at 1.5 T (**Fig. E1-A**) and identified at 3.0 T (**Fig. E1-B**) by both readers.

Copyright © by The Journal of Bone and Joint Surgery, Incorporated

http://dx.doi.org/10.2106/JBJS.L.01195

TABLE E-1 Imaging Parameters for the 1.5 and 3.0-T Turbo Spin-Echo MRI Sequences*

	Sagittal PD/T2		Coronal T1		Coronal FS IW		Axial FS IW	
Parameter	1.5 T	3.0 T	1.5 T	3.0 T	1.5 T	3.0 T	1.5 T	3.0 T
Repetition time *(msec)*	3340	4700	500	514	3590	3400	3000	3670
Echo time *(msec)*	21/85	21/89	14	12	28	25	28	25
Matrix size	307 × 384	448 × 448	307 × 384	279 × 448	307 × 384	328 × 448	307 × 384	358 × 448
Field of view *(mm)*	160	160	160	160	160	160	160	160
Slice thickness *(mm)*	3	2	3	3	3	3	3	3
Voxel size *(mm)*	0.5 × 0.4 × 3.0	0.4 × 0.4 × 2.0	0.5 × 0.4 × 3.0	0.5 × 0.4 × 3.0	0.5 × 0.4 × 3.0	0.4 × 0.4 × 3.0	0.5 × 0.4 × 3.0	0.4 × 0.4 × 3.0
Bandwidth *(Hz/pixel)*	191	260	150	192	130	192	130	192
Turbo factor	5	5	2	2	7	7	7	7
No. of signals acquired	1	2	1	1	1	1	1	1
PAT	2	2	2	2	2	2	2	2
Interslice gap *(%)*	10	10	10	10	10	10	10	10
No. of slices	29	39	30	27	30	27	35	30
Imaging time *(min:sec)*	2:20	7:09	2:26	1:42	2:25	1:50	2:32	1:52

*PD = proton density, FS = fat suppressed, IW = intermediate-weighted, and PAT = parallel acquisition technique.

Copyright © by The Journal of Bone and Joint Surgery, Incorporated

http://dx.doi.org/10.2106/JBJS.L.01195

TABLE E-2 MRI Diagnostic Errors at 1.5 and 3.0 T*

		Reader A†		Reader B†			
Location*	Patient No.	1.5 T	3.0 T	1.5 T	3.0 T	Arthroscopic Finding	MRI Diagnostic Error‡
MM	1	1	2	1	2	Posterior horn tear	FN MM tear
MM	2	1	1	1	1	Posterior horn tear	FN MM tear
MM	3	2	1	3	4	Posterior horn tear	FN MM tear
MM	4	3	4	3	5	Posterior horn tear	FN MM tear
MM	5	3	4	4	4	Posterior horn tear	FN MM tear
MM	6	1	3	3	3	Posterior horn tear	FN MM tear
MM	7	5	5	5	5	None	FP MM tear
MM	8	5	5	5	5	None	FP MM tear
MM	9	1	2	4	5	None	FP MM tear
MM	10	1	1	1	4	None	FP MM tear
LM	11	3	3	4	5	Body tear	FN LM tear
LM	12	1	1	1	1	Posterior horn tear	FN LM tear
LM	13	3	5	3	4	Body tear	FN LM tear
LM	14	1	1	3	4	Posterior horn tear	FN LM tear
LM	15	1	1	1	1	Body tear	FN LM tear
LM	16	4	3	5	5	Anterior horn tear	FN LM tear
LM	3	5	5	4	4	None	FP LM tear
LM	17	1	1	4	5	None	FP LM tear
LM	18	1	1	1	4	None	FP LM tear
ACL	19	3	5	5	5	Complete tear	FN ACL tear
ACL	2	1	1	3	3	Partial tear	FN ACL tear
ACL	20	1	1	1	1	Complete tear	FN ACL tear
ACL	21	1	1	1	1	Partial tear	FN ACL tear
ACL	17	1	1	1	1	Partial tear	FN ACL tear
ACL	22	1	1	1	1	Partial tear	FN ACL tear

*MM = medial meniscus, LM = lateral meniscus, and ACL = anterior cruciate ligament. †The values are the confidence grade assigned by the reader during the first interpretation of the MR images (1 = definitely intact, 2 = probably intact, 3 = possibly intact, 4 = probably not intact, and 5 = definitely not intact). ‡FN = false-negative, and FP = false-positive.