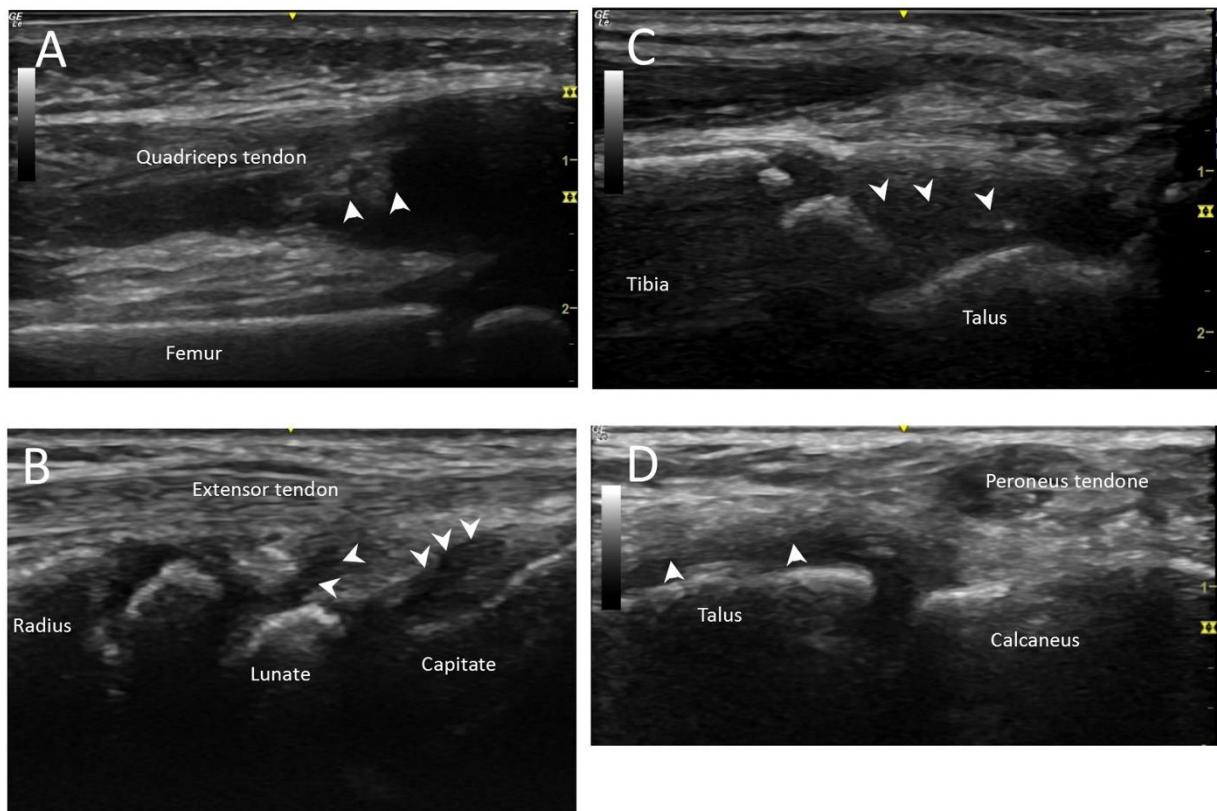


ONLINE SUPPLEMENTARY DATA

Supplementary Figure 1. Illustrations of synovial thickening in knee (A), wrist (B), tibiotalar joint (C) and subtalar joint (D). Arrowheads indicate synovial thickening as hypoechoic material confined within the joint capsule.



Supplementary Table 1. Ultrasound and clinical follow-up findings for 40 patients with clinically inactive disease at baseline.

Subject	Baseline US findings	Follow-up ultrasound visit			Total duration of follow-up since baseline (months)	Clinical disease course (arthritis) (time to flare since baseline US)
		Ultrasound findings	CID or not	Time from baseline (months)		
1	Normal	T (subtalar)	Yes	7	19	No flare
2	Normal	Normal	Yes	3	19	No flare
3	Normal	Normal	Yes	3	23	Flare, knee (8.3 mo)
4	PD (wrist)	Normal	Yes	16	16	No flare
5	Normal	Normal	Yes	5	22	Flare, knee (17.0 mo)
6	Normal	PD (wrist)	Yes	3	23	No flare
7	Normal	PD (wrist)	Yes	3	23	Flare, knee, subtalar, tibiotalar (7.1 mo)
8	Normal	E (knee), T (subtalar)	Yes	2	24	Flare, wrist (22.4 mo)
9	Normal	Normal	Yes	8	24	Flare, knee (23.7 mo)
10	Normal	Normal	Yes	4	23	Flare, knee (11.1 mo)
11	T (subtalar)	E (subtalar), T (subtalar)	Yes	6	21	No flare
12	Normal	T (subtalar), PD (subtalar)	Yes	6	21	Flare, knee (10.0 mo)
13	Normal	T (subtalar), PD (subtalar)	No (hip)	14	23	Flare, hip (8.0 mo)

14	Normal	T (subtalar), E (subtalar)	Yes	6	22	Flare, knee (16.0 mo)
15	PD (knee)	T (subtalar)	No (knee)	4	19	Flare, knee (6.0 mo)
16	PD (wrist, subtalar), E (knee)	Normal	Yes	6	23	No flare
17	E (knee)	T (subtalar)	Yes	3	23	Flare, knee (15.7 mo)
18	PD (subtalar)	PD (subtalar)	Yes	10	23	Flare, knee, wrist (20.3 mo)
19	PD (wrist)	Normal	Yes	15	20	No flare
20	T (subtalar)	T (subtalar)	Yes	6	20	Flare, knee (8.7 mo)
21	Normal	E (knee)	Yes	3	16	No flare
22	Normal	Normal	Yes	4	23	Flare, knee (22.6mo)
23	Normal	Normal	Yes	5	24	No flare
24	PD (tibiotalar)	Tendon (wrist)	Yes	3	24	No flare
25	PD (wrist)	T (subtalar), PD (subtalar)	No (knee, tibiotalar)	8	19	Flare, knee, tibiotalar (5.8 mo)
26	Normal	Normal	Yes	4	21	No flare
28	Normal	Normal	Yes	12	22	Flare, knee (3.7 mo)
29	PD (wrist)	Normal	Yes	8	22	Flare, knee, tibiotalar, wrist (2.6 mo)

30	E (subtalar), T (subtalar), PD (tibiotalar)	E (subtalar), T (subtalar)	Yes	6	23	Flare, knee, subtalar, tibiotalar (14.3 mo)
31	Normal	N/A	N/A	N/A	22	No flare
32	PD (wrist)	PD (wrist), T (subtalar)	No (tibiotalar)	8	21	Flare, tibiotalar (12.0 mo)
34	PD (wrist, subtalar)	Normal	Yes	11	11	No flare
35	PD (subtalar)	Normal	No (knee)	5	12	Flare, knee (4.4 mo)
37	Normal	T (subtalar), PD (subtalar)	Yes	7	21	Flare, knee (17.9 mo)
38	E (subtalar)	T (subtalar), PD (subtalar)	Yes	4	22	No flare
39	E (subtalar), T (subtalar), PD (wrist, subtalar)	N/A	N/A	N/A	20	Flare, knee, tibiotalar (3.6 mo)
40	E (knee), PD (wrist)	E (knee), T (subtalar), PD (knee)	Yes	3	24	No flare
41	Normal	Normal	Yes	4	20	No flare
45	Normal	Normal	Yes	3	3	No flare
46	Normal	E (knee)	No (TMJ)	3	19	Flare, TMJ (3.0 mo)

E: effusion, PD: power Doppler, US: ultrasound; T: thickening, Tendon: tenosynovitis, N/A: not available, TMJ: temporomandibular joint; CID: clinically inactive disease.

Supplementary Table 2. Detailed timing and joints in patients with arthritis flares.

Subject	Left wrist	Right wrist	Left knee	Right knee	Left tibiotalar	Right tibiotalar	Left subtalar	Right subtalar	Time to flare since baseline (months)
03	0	0	0	1	0	0	0	0	8.3
07	0	0	0	1	0	0	0	0	7.1
08	1	1	0	0	0	0	0	0	22.4
09	0	0	0	1	0	0	0	0	23.7
10	0	0	1	0	0	0	0	0	11.1
12	0	0	0	1	0	0	0	0	14
14	0	0	0	1	0	0	0	0	12.5
17	0	0	1	0	0	0	0	0	15.7
18	0	0	1	1	0	0	0	0	20.3
20	0	0	1	1	0	0	0	0	8.7
22	0	0	1	1	0	0	0	0	22.6
25	0	0	0	1	0	1	0	0	5.8
28	0	0	0	1	0	0	0	0	3.7
29	0	0	0	0	0	1	0	0	2.6
30	0	0	1	0	1	0	1	0	14.3

35	0	0	0	1	0	0	0	0	4.4
37	0	0	1	0	0	0	0	0	17.9
39	0	0	1	1	0	1	0	0	3.6

0: normal; 1: active arthritis.