

Tables S1-S4: US, clinical and laboratory parameters under various therapies over twelve months of different therapies. (*Values are the mean \pm SD; {95%CI})

Table S1: Group 1 (before and after start of first-line DMARDs)

Group 1 (n=118)	baseline	3 months	6 months	12 months
Synovitis sum score in GSUS	9.0 \pm 5.4 {95%CI: 8.03-9.99}	6.1 \pm 4.8 {95%CI: 5.24-7.02} p<0.001	5.2 \pm 4.5 {95%CI: 4.38-6.03} p<0.001	4.4 \pm 4.3 {95%CI: 3.61-5.19} p<0.001
Synovitis sum score in PDUS	4.0 \pm 4.8 {95%CI: 3.17-4.94}	1.8 \pm 2.4 {95%CI: 1.38-2.28} p<0.001	1.4 \pm 2.2 {95%CI: 0.99-1.84} p<0.001	1.3 \pm 2.1 {95%CI: 0.87-1.65} p<0.001
Tenosynovitis sum score in GSUS	1.6 \pm 1.9 {95%CI: 1.23-1.90}	0.7 \pm 1.2 {95%CI: 0.53-0.96} p<0.001	0.6 \pm 1.1 {95%CI: 0.35-0.75} p<0.001	0.4 \pm 0.9 {95%CI: 0.27-0.59} p<0.001
Tenosynovitis sum score in PDUS	1.0 \pm 1.8 {95%CI: 0.62-1.36}	0.4 \pm 1.2 {95%CI: 0.19-0.65} p<0.001	0.3 \pm 0.8 {95%CI: 0.12-0.43} p<0.001	0.2 \pm 0.65 {95%CI: 0.03-0.28} p<0.001
Erosion sum score	2.8 \pm 3.9 (0-14) {95%CI: 2.08-3.51}	2.7 \pm 3.7 {95%CI: 2.00-3.36} p=0.989	2.8 \pm 3.9 {95%CI: 3.10-3.51} p=0.793	2.9 \pm 3.9 {95%CI: 2.41-3.57} p=0.722
ESR mm/h	31.1 \pm 22.3 {95%CI: 27.08-35.12}	21.8 \pm 18.6 {95%CI: 18.45-25.15} p<0.001	19.7 \pm 18.0 {95%CI: 16.45-22.95} p<0.001	17.2 \pm 15.4 {95%CI: 14.42-19.98} p<0.001
CRP mg/l	20.5 \pm 28.6 {95%CI: 15.35-25.65}	6.9 \pm 10.3 {95%CI: 5.03-8.77 } p<0.001	5.2 \pm 6.9 {95%CI: 3.96-6.44} p<0.001	5.6 \pm 7.2 {95%CI: 4.3-6.9} p<0.001
DAS28	5.0 \pm 1.4 {95%CI: 4.75-5.25}	3.5 \pm 1.4 {95%CI: 3.24-3.75} p<0.001	3.3 \pm 1.4 {95%CI: 3.05-3.55} p<0.001	2.9 \pm 1.4 {95%CI: 2.65-3.15} p<0.001

Table S2: Group 2 (therapy switch from DMARDs to second DMARDs)

Group 2 (n=108)	Baseline	3 months	6 months	12 months
Synovitis sum score in GSUS	7.4±4.3 {95%CI: 6.58-8.22}	6.5±4.4 {95%CI: 5.62-7.31} p=0.005	6.4±4.3 {95%CI: 5.57-7.22} p=0.006	6.1±4.8 {95%CI: 5.21-7.03} p=0.001
Synovitis sum score in PDUS	2.6±3.2 {95%CI: 2.00-3.29}	1.8±2.4 {95%CI: 1.32-2.29} p=0.012	1.6±2.5 {95%CI: 1.08-2.08} p<0.001	1.2±2.3 {95%CI: 0.78-1.71} p<0.001
Tenosynovitis sum score in GSUS	1.2±2.4 {95%CI: 0.89-1.48}	0.6±1.1 {95%CI: 0.38-0.8} p<0.001	0.5±1.0 {95%CI: 0.36-0.73} p<0.001	0.4±0.9 {95%CI: 0.22-0.57} p<0.001
Tenosynovitis sum score in PDUS	0.8±1.7 {95%CI: 0.4-1.1}	0.2±0.7 {95%CI: 0.09-0.38} p=0.001	0.3±0.8 {95%CI: 0.1-0.42} p=0.003	0.2±0.5 {95%CI: 0.05-0.25} p=0.001
Erosion sum score	2.3±3.3 {95%CI: 1.86-2.92}	2.1±3.2 {95%CI: 1.48-2.69} p=0.269	2.2±3.3 {95%CI: 1.56-2.83} p=0.713	2.3±3.4 {95%CI: 1.62-2.93} p=0.633
ESR mm/h	25.7±19.4 {95%CI: 22.05-29.35}	20.4±15.2 {95%CI: 17.54-23.26} p=0.003	20.2±13.0 {95%CI: 17.74-22.66} p=0.001	21.4±14.4 {95%CI: 18.69-24.11} p=0.014
CRP mg/l	13.4±23.0 {95%CI: 9.06-17.74}	7.8±9.3 {95%CI: 6.05-9.55} p=0.014	7.6±9.2 {95%CI: 5.87-9.33} p=0.002	7.1±7.1 {95%CI: 5.75-8.45} p=0.001
DAS28	4.3±1.4 {95%CI: 4.04-4.56}	3.7±1.3 {95%CI: 3.45-3.95} p<0.001	3.6±1.3 {95%CI: 3.35-3.85} p<0.001	3.5±1.3 {95%CI: 3.25-3.75} p<0.001

Table S3: Group 3(start with first-line biologic after DMARDs therapy)

Group 3 (n=153)	baseline	3 months	6 months	12 months
Synovitis sum score in GSUS	9.9±5.7 {95%CI: 8.97-10.79}	7.6±5.5 {95%CI: 6.74-8.49} p<0.001	6.8±5.3 {95%CI: 5.92-7.61} p<0.001	5.6±4.8 {95%CI: 4.85-6.37} p<0.001
Synovitis sum score in PDUS	4.3±4.3 {95%CI: 3.64-5.04}	2.7±3.8 {95%CI: 2.10-3.32} p<0.001	2.3±3.3 {95%CI: 1.73-2.79} p<0.001	1.4±2.3 {95%CI: 1.01-1.75} p<0.001
Tenosynovitis sum score in GSUS	1.7±2.0 {95%CI: 1.36-2.00}	0.8±1.4 {95%CI: 0.56-1.02} p<0.001	0.6±1.1 {95%CI: 0.38- 0.72} p<0.001	0.5±1.1 {95%CI: 0.3-0.65} p<0.001
Tenosynovitis sum score in PDUS	0.9±1.9 {95%CI: 0.59-1.22}	0.5±1.3 {95%CI: 0.23-0.67} p=0.001	0.3±0.9 {95%CI: 0.17-0.46} p<0.001	0.2±0.8 {95%CI: 0.09-0.34} p<0.001
Erosion sum score	5.0±4.4 {95%CI: 4.28-5.67}	5.1±4.6 {95%CI: 4.38-5.85} p=0.137	4.7±4.4 {95%CI: 3.97-5.39} p=0.330	4.8±4.4 {95%CI: 4.12-5.54} p=1.0
ESR mm/h	33.3±21.7 {95%CI: 29.87-36.73}	25.3±20.3 {95%CI: 22.08-28.52} p<0.001	25.3±19.6 {95%CI: 22.2-28.4} p<0.001	23.5±18.4 {95%CI: 20.58-26.42} p<0.001
CRP mg/l	17.3±22.7 {95%CI: 13.7-20.9}	11.9±21.7 {95%CI: 8.46-15.34} p<0.001	9.6±13.5 {95%CI: 7.46-11.74} p<0.001	6.7±8.4 {95%CI: 5.36-8.04} p<0.001
DAS28	5.24±1.3 {95%CI: 5.03-5.45}	3.9±1.5 {95%CI: 3.67-4.13} p=0.500	3.7±1.5 {95%CI: 3.47-3.93} p=1.0	3.6±1.4 {95%CI: 3.38-3.82}

Table S4: Group 4 (therapy change from biologic to second biologic)

Group 4 (n=53)	baseline	3 months	6 months	12 months
Synovitis sum score in GSUS	6.1±4.2 {95%CI: 4.95-7.27}	5.5±4.5 {95%CI: 4.24-6.7} p=0.087	5.8±5.4 {95%CI: 4.31-7.27} p=0.320	4.8±4.9 {95%CI: 3.47-8.15} p=0.006
Synovitis sum score in PDUS	2.4±2.6 {95%CI: 1.61-3.16}	1.9±2.6 {95%CI: 1.13-2.73} p=0.189	1.7±2.5 {95%CI: 0.84-2.50} p=0.041	1.5±2.5 {95%CI: 0.74-2.26} p=0.005
Tenosynovitis sum score in GSUS	1.1±1.6 {95%CI: 0.70-1.58}	0.6±1.1 {95%CI: 0.70-1.58} p=0.003	0.8±1.2 {95%CI: 0.42-1.09} p=0.043	0.5±0.8 {95%CI: 0.23-0.67} p=0.003
Tenosynovitis sum score in PDUS	0.5±1.1 {95%CI: 0.1-0.85}	0.5±1.4 {95%CI: 0.10-0.92} p=0.497	0.3±0.8 {95%CI: 0.05-0.57} p=0.407	0.2±0.6 {95%CI: 0.02-0.35} p=0.281
Erosion sum score	4.3±4.2 {95%CI: 3.18-5.46}	4.3±4.4 {95%CI: 3.10-5.54} p=0.953	4.1±4.0 {95%CI: 2.97-5.18} p=0.389	3.6±3.8 {95%CI: 2.53-4.64} p=0.008
ESR mm/h	26.29±20.8 {95%CI: 20.8-31.78}	24.79±19.5 {95%CI: 19.55-30.03} p=0.514	21.35±17.2 {95%CI: 16.73-25.97} p=0.057	22.2±16.9 {95%CI: 17.64-26.76} p=0.152
CRP mg/l	8.33±11.0 {95%CI: 5.38-11.28}	6.87±8.6 {95%CI: 4.54-9.2} p=0.227	6.16±9.6 {95%CI: 3.58-8.74} p=0.080	6.21±8.3 {95%CI: 3.97-8.45} p=0.186
DAS28	3.84±1.3 {95%CI: 3.49-4.19}	3.6±1.3 {95%CI: 3,25-3,95} p=0.153	3.48±1.4 {95%CI: 3.11-3.85} p=0.171	3.18±1.4 {95%CI: 2.81-3.55} p=0.004