

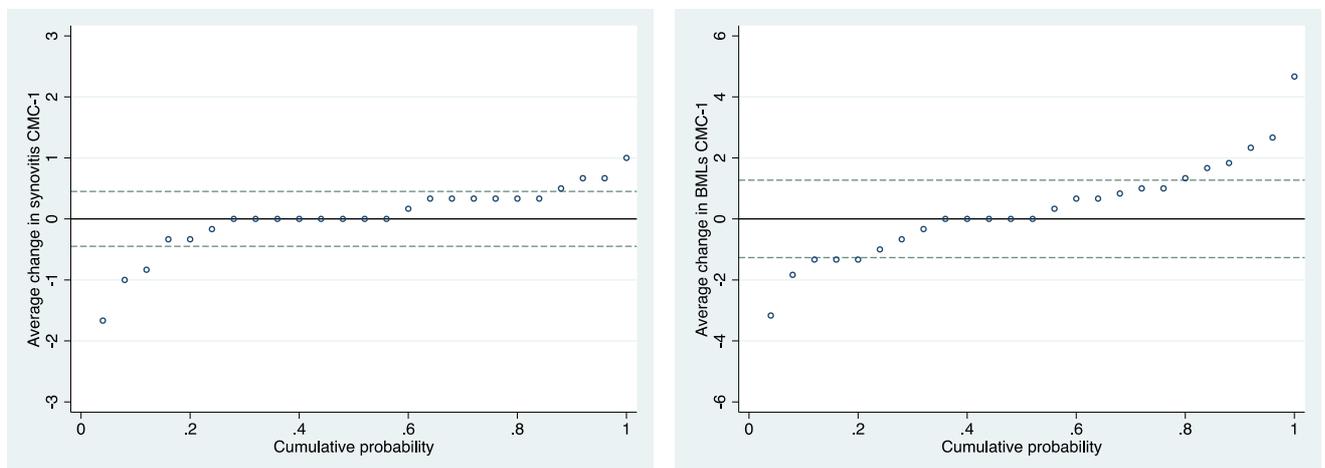
## ONLINE SUPPLEMENTARY DATA

### MRI sequences HOSTAS cohort

MR sequences in the HOSTAS cohort included T1-weighted (T1w) fast spin echo (FSE) images in coronal and axial planes (TR/TE 575/11.2, slice thickness 2.0 and 3.0 mm, slice gap 0.2 and 0.3 mm), and T2w FSE images with frequency-selective fat-saturation in coronal and axial planes (TR/TE 3000/61.8, slice thickness 2.0 and 3.0 mm, slice gap 0.2 and 0.3 mm).

### Changes of synovitis and bone marrow lesions (BMLs) in individual patients

In Supplementary Figure 1 (below) cumulative probability plots of the change scores of synovitis (left panel) and BMLs (right panel) in the CMC-1 joint are shown. In these plots, each dot represents the change score of an individual patient (based on average scores of all readers). Scores are ordered from the lowest (0) to the highest (1) cumulative probability on the x-axis. The red horizontal line denotes a change score of 0 (i.e., no change over time). Data from the HOSTAS cohort are presented. This figure shows that, despite no average change over time, in individual patients these features did show change over time, both positively and negatively.



**Supplementary Figure 1.** Cumulative probability plots of change scores in synovitis (left) and BMLs (right) in the CMC-1 joint in the HOSTAS cohort. Dotted lines represent smallest detectable change (SDC).

### Change above the smallest detectable change (SDC)

The number of participants with a change score above the SDC are presented in Supplementary Table 1.

**Supplementary Table 1.** Number (%) of patients with change score of each MRI feature greater or lower than the smallest detectable change (SDC).

MRI feature	HOSTAS cohort (n=25)				Clinical trial (n=24)			
	CMC-1		STT		CMC-1		STT*	
	+ SDC	- SDC	+ SDC	- SDC	+ SDC	- SDC	+ SDC	- SDC
Synovitis	4 (16)	3 (12)	3 (12)	2 (8)	1 (4)	3 (13)	2 (13)	0 (0)
Subchondral bone defects	6 (24)	0 (0)	4 (16)	0 (0)				
Osteophytes	3 (12)	0 (0)	2 (8)	0 (0)				
Cartilage assessment	2 (8)	0 (0)	1 (4)	1 (4)				
Subluxation	2 (8)	0 (0)						
Bone marrow lesions	6 (24)	5 (20)	4 (16)	4 (16)	5 (21)	3 (13)	4 (25)	1 (6)

Based on average score of all readers. \* STT scored in n=16 patients, trapezoid not included.

CMC-1, first carpometacarpal; MRI, magnetic resonance imaging; n, number; STT, scaphotrapezotrapezoid.