Abstract Table 1. Changes in the GP and each PRO (n=119)

item	Baseline	12 months after op.	P
GP (mmHg)	125.6	139.2	0.009
Pain VAS (mm)	32.3	20.1	1E-07
GH (mm)	35.2	24.1	4.6E-07
DAS28-CRP(4)	3.1	2.2	3.1E-15
DASH	42.1	35.1	6E-05
EQ-5D	0.72	0.76	0.0005
BDI-II	13.4	11.9	0.008
HAQ-DI	1.07	0.91	0.0021

Abstract Table 2. Baseline value in the REM group (n=47) and the non-REM group (n=72)

item	REM	Non-REM	P
GP (mmHg)	151	109	8.35E-05
DASH	26.1	52.2	1.54E-11
EQ-5D	0.80	0.66	3.51E-09
BDI-II	10.1	15.5	0.0011
HAQ-DI	0.5	1.4	7.19E-14

Conclusion: GP and other four PROs were validated as good objective tools for assessing the physical function after hand and wrist surgeries. It would be helpful for rheumatologists to consider the timing of surgery in RA patients based on the cut-offs determined in this study⁽²⁾.

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In the other items, there was not a significant difference between two groups
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AB0262 SERUM CALPROTECTIN AS A MARKER OF DISEASE ACTIVITY IN PATIENTS WITH RHEUMATOID ARTHRITIS, AXIAL SPONDYLOARTHRITIS AND PSORIATIC ARTHRITIS

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Background: Calprotectin is a heterodimeric complex of S100A8 and S100A9 calcium-binding proteins. Stored in the cytosol of granulocytes, it is released under cell stress and acts as an endogenous damage-associated pattern molecule. In contrast to C-reactive protein (CRP), it is not an acute phase protein. Serum calprotectin levels correlate with disease activity of several inflammatory rheumatic diseases.

Objectives: To investigate association of serum calprotectin with clinical activity in rheumatoid arthritis (RA), axial spondyloarthritis (axSpA) and psoriatic arthritis (PsA).

Methods: We performed retrospective analysis of patients with RA, axSpA and PsA from the Swiss Clinical Quality Management (SCQM) registry. Age- and sex-matched asymptomatic first-degree relatives of RA patient without sign of autoimmunity were used as healthy controls (HC, n=72). Serum calprotectin was measured by ELISA (Inova Diagnostics, research use only). Calprotectin levels were categorized into quartiles for each disease. Clinical outcomes included swollen joint count (SJC), CDAI, HAQ and ultrasound power Doppler (USPD) score for RA patients; BASDAI, BASFI and ASDAS for axSpA; SJC and DAPSA for PsA. Comparison of outcomes by calprotectin quartile levels was performed using Kruskal-Wallis tests for continuous

outcomes or trend tests for categorical. We used multivariable regression models to compare association of CRP and calprotectin with USPD. Proportions of explained variances were estimated using R².

Figure: Serum calprotectin level by diagnosis

Results: 1729 subjects [RA=969, axSpA=451, PsA=237 and HC=72] were included. 209 RA patients had an ultrasound performed at time of blood collection. Median levels of serum calprotectin were higher in each disease compared to HC ($p<0.01$; Figure). In RA, all clinical scores were statistically different across quartiles indicating an association between calprotectin levels and higher disease activity (SJC, CDAI) and severity (HAQ) (Table). In univariable regression models, both CRP ($R^2=0.02$, $p=0.04$) and calprotectin ($R^2=0.10$, $p<0.001$) were associated with USPD scores. Multivariable model analysis revealed that calprotectin alone was as predictive of USPD scores as calprotectin and CRP together (likelihood ratio test between models $p=0.14$). In axSpA, an association between level of calprotectin and ASDAS score ($p<0.01$) was observed. For PsA, SJC, DAPSA and CRP did not differ across calprotectin quartiles.

Table: Clinical outcomes by calprotectin quartile levels. * Results are mean (SD) except for those with an asterisk which represent median (IQR):

Calprotectin quartiles [µg/ml]	1	2	3	4	p
RA quartiles (n)	[0-1.7] (243)	[1.7-2.6] (242)	[2.6-4.3] (242)	[4.3-13] (242)	
SJC	1.3 (2.5)	1.7 (2.8)	2.2 (3.3)	3.4 (4.5)	<0.001
HAQ	0.6 (0.6)	0.8 (0.7)	0.8 (0.7)	1.0 (0.7)	<0.001
CDAI	7.3 (7.9)	9.8 (9.9)	11.2 (11.7)	12.3 (13.4)	0.002
USPD	2.2 (5.9)	2.0 (4.0)	2.0 (3.0)	4.7 (6.1)	0.01
CRP mg/l*	2.0 [1.0,4.6]	2.0 [1.0,7.0]	2.2 [1.0,7.0]	4.2 [2.0,12.0]	<0.001
axSpA quartiles (n)	[0-1.6] (113)	[1.6-2.4] (113)	[2.4-3.9] (113)	[3.9-13] (113)	
BASDAI	3.6 (2.3)	4.0 (2.4)	3.5 (2.4)	4.1 (2.3)	0.2
BASFI	2.1 (2.3)	2.7 (2.6)	2.3 (2.3)	2.8 (2.5)	0.2
ASDAS	2.1 (0.9)	2.4 (1.0)	2.2 (1.1)	2.7 (1.0)	0.01
CRP mg/l*	3.0 [1.0,8.0]	2.0 [1.0,8.0]	3.0 [1.0,8.0]	4.0 [2.0,13.0]	0.002
PsA quartiles (n)	[0-1.4] (60)	[1.4-2.2] (59)	[2.2-3.4] (59)	[3.4-12] (59)	
SJC	1.8 (4.5)	1.3 (2.5)	1.1 (2.5)	2.2 (4.4)	0.3
DAPSA	18.2 (23.5)	15.6 (17.5)	18.4 (16.8)	21.1 (24.2)	0.8
CRP mg/l *	2.2 [1.0,8.0]	2.0 [1.0,5.5]	4.0 [1.9,7.0]	3.9 [1.8,7.8]	0.2

Conclusion: This large study supports the association of serum calprotectin levels with disease activity and severity in RA and shows an association between serum calprotectin and ASDAS in axSpA.

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