Supplemental File –
results RA-Patients without chronic pain and/or osteoarthritis

1. Convergent validity: Bravais-Pearson correlation

r_{T1} = 0.81 – 0.88, $r^2 \geq 0.66$, $p < 0.001$

r_{T2} = 0.85 – 0.90, $r^2 \geq 0.72$, $p < 0.001$

$r_{T3\ (total\ subgroup)}$= 0.87 – 0.93, $r^2 \geq 0.76$, $p < 0.001$

$r_{T3(d6\text{-}13)}$ = 0.85 – 0.92, $r^2 \geq 0.72$, $p < 0.001$

2. Convergent validity: Partial correlation controlling for physical functioning (HAQ-DI)

r_{T1} = 0.72 – 0.81, $r^2 \geq 0.52$, $p < 0.001$

r_{T2} = 0.77 – 0.83, $r^2 \geq 0.59$, $p < 0.001$

$r_{T3(total\ subgroup)}$ = 0.79 – 0.88, $r^2 \geq 0.62$, $p < 0.001$

$r_{T3(d6\text{-}13)}$ = 0.75 – 0.88, $r^2 \geq 0.56$, $p < 0.001$

3. Discriminant validity: Bravais-Pearson correlation of pain scales with age and disease duration (*r* in absolute values)

Age:

$|r_{T1}|$ = 0.01 – 0.05, $r^2 < 0.01$, $p \geq 0.49$

$|r_{T2}|$ = 0.00 – 0.07, $r^2 < 0.01$, $p \geq 0.37$

$|r_{T3(total\ subgroup)}|$ = 0.07 – 0.08, $r^2 < 0.01$, $p \geq 0.27$

$|r_{T3(d6\text{-}13)}|$ = 0.03 – 0.10, $r^2 \leq 0.01$, $p \geq 0.35$

Disease duration (years):

$|r_{T1}|$ = 0.07 – 0.10, $r^2 \leq 0.01$, $p \geq 0.16$

$|r_{T2}|$ = 0.10 – 0.11, $r^2 \leq 0.01$, $p \geq 0.13$

$|r_{T3(total\ subgroup)}|$ = 0.11 – 0.18, $r^2 \leq 0.03$, $p \geq 0.02$

$|r_{T3(d6\text{-}13)}|$ = 0.09 – 0.18, $r^2 \leq 0.03$, $p \geq 0.08$

4. Retest-reliability for patients maintaining antirheumatic therapy: Bravais-Pearson correlation

r_{VAS} = 0.85 – 0.96, $r^2 \geq 0.72$, $p < 0.001$

r_{NRS} = 0.90 – 0.98, $r^2 \geq 0.81$, $p < 0.001$

r_{VRS} = 0.81 – 0.91, $r^2 \geq 0.66$, $p < 0.001$

$r_{VAS(d6\text{-}13)}$ = 0.86, $r^2 \geq 0.74$, $p < 0.001$

$r_{NRS(d6\text{-}13)}$ = 0.88 – 0.89, $r^2 \geq 0.77$, $p < 0.001$

$r_{VRS(d6\text{-}13)}$ = 0.77 – 0.84, $r^2 \geq 0.59$, $p < 0.001$

5. Retest-reliability for patients maintaining antirheumatic therapy: Partial correlation controlling for the physical functioning (HAQ-DI)

r_{VAS} = 0.81 – 0.96, $r^2 \geq 0.66$, $p < 0.001$

r_{NRS} = 0.84 – 0.96, $r^2 \geq 0.71$, $p < 0.001$

r_{VRS} = 0.74 – 0.86, $r^2 \geq 0.55$, $p < 0.001$

$r_{VAS(d6\text{-}13)}$ = 0.84, $r^2 \geq 0.71$, $p < 0.001$

$r_{NRS(d6\text{-}13)}$ = 0.85 – 0.86, $r^2 \geq 0.72$, $p < 0.001$

$r_{VRS(d6\text{-}13)}$ = 0.71 – 0.79, $r^2 \geq 0.50$, $p < 0.001$

6. Responsiveness for patients with a change in antirheumatic therapy: Range of SRMs between T1 and T3 as well as between T2 and T3 (total subgroup)

SRM_{VAS} = 0.11 - 0.18

SRM_{NRS} = 0.11 - 0.14

SRM_{VRS} = 0.13 - 0.16

7. Responsiveness for patients with a change in antirheumatic therapy: Range of SRMs between T1 and T3 as well as between T2 and T3 (completion between days 6-13 after consultation)

SRM_{VAS} = -0.11 - -0.23

SRM_{NRS} = 0.00 - 0.07

SRM_{VRS} = -0.08 - 0.00

8. Changes in pain ratings: Dependent samples test (total subgroup); Wilcoxon signed-rank test for treatment change, dependent samples t-test for stable medication

Treatment change:	Stable medication:
$Z_{VAS(T1-T2)}$ = -0.61, p = 0.553, r = -0.07	$t_{VAS(T1-T2)}(136)$ = 2.08, p = 0.040, r = 0.18
$Z_{NRS(T1-T2)}$ = -0.71, p = 0.727, r = -0.07	$t_{NRS(T1-T2)}(140)$ = 1.63, p = 0.105, r = 0.14
$Z_{VRS(T1-T2)}$ = 0.00, p = 1.000, r = 0.00	$t_{VRS(T1-T2)}(136)$ = 0.89, p = 0.373, r = 0.08
$Z_{VAS(T1-T3)}$ = -0.60, p = 0.560, r = 0.08	$t_{VAS(T1-T3)}(127)$ = 1.75, p = 0.083, r = 0.15
$Z_{NRS(T1-T3)}$ = -0.72, p = 0.483, r = 0.09	$t_{NRS(T1-T3)}(133)$ = 0.42, p = 0.675, r = 0.04
$Z_{VRS(T1-T3)}$ = -0.78, p = 0.613, r = 0.09	$t_{VRS(T1-T3)}(128)$ = 2.17, p = 0.032, r = 0.19

9. Changes in pain ratings: Dependent samples test (completion between days 6-13 after consultation); Wilcoxon signed-rank test for treatment change, dependent samples t-test for stable medication

Treatment change:	Stable medication:
$Z_{VAS(T1-T2)}$ = -0.29, p = 0.793, r = -0.05	$t_{VAS(T1-T2)}(68)$ = 2.06, p = 0.043, r = 0.24
$Z_{NRS(T1-T2)}$ = -1.73, p = 0.250, r = -0.28	$t_{NRS(T1-T2)}(70)$ = -0.26, p = 0.798, r = -0.03
$Z_{VRS(T1-T2)}$ = 0.00, p = 1.000, r = 0.00	$t_{VRS(T1-T2)}(65)$ = 1.00, p = 0.321, r = 0.12
$Z_{VAS(T1-T3)}$ = -0.49, p = 0.651, r = -0.09	$t_{VAS(T1-T3)}(67)$ = 1.01, p = 0.316, r = 0.12
$Z_{NRS(T1-T3)}$ = 0.00, p = 1.000, r = 0.00	$t_{NRS(T1-T3)}(70)$ = -1.10, p = 0.275, r = 0.13

$Z_{VRS(T1-T3)}$ = -0.33, p = 1.000, r = -0.06 $t_{VRS(T1-T3)}(67)$ = 2.31, p = 0.024, r = 0.27