roles) of the Patient-Reported Outcomes Measurement Information System (PROMIS).

Results: Among 100 RD patients, 52 (52%) had a diagnosis of Rheumatoid Arthritis; 17 (17%) had a diagnosis of axial spondylorhritis (Ankylosing Spondylitis and Psoriatic Arthritis); 25 (25%) had connectivitis (i.e. Lupus, Systemic Sclerosis, Sjögren Syndrome), and finally 6 (6%) had vasculitis. Median disease duration was 7±5 years. Just under half (43%) of RD patients had active disease measured by specific disease activity index. As shown in table 1, no significant difference highlight between the two groups with regard to anthropometric and demographic characteristics. We found that patients report significantly greater psychosocial changes than healthy controls. More specifically, as shown in figure 1A, mean T score for anxiety, depression, fatigue and sleep disturbances were significantly higher in the RD patients than in healthy controls (56 ± 9 vs 48 ± 8 $p < 0.001$; 52 ± 9 vs 46 ± 8 $p < 0.001$; 58 ± 8 vs 48 ± 8 $p < 0.001$; 52 ± 10 vs 44 ± 8 $p < 0.001$) respectively. Moreover, also in the social dimension in terms of pain interference, physical functions and satisfaction with participation in social roles, patients showed a median T score worse than healthy controls (Fig.1B).

Table 1

	Patients (N=100)	Healthy (N=100)	p
Demographic and Anthropometric			
ns	Age (years)	52.5±11	51±18
ns	Gender n male (%)	43 (43)	47 (47)
ns	BMI (Kg/m2)	25.1±4	27.8±4
ns	Smoke n (%)	52 (52)	46 (46)
ns	Marital Status n not married (%)	42(42)	41 (41)
ns	Occupation n yes (%)	31 (31)	35 (35)
ns	Education level n degree (%)	54 (54)	64 (64)
ns	Rheumatoid Arthritis	52 (52)	-
ns	Axial Spondylorhritis	17 (17)	-
ns	Connectivitis	25 (25)	-
ns	Vasculitis	6 (6)	-
ns	Disease duration (years)	7.1±5.18	-
ns	Disease Activity n yes (%)	43 (43)	-
	Medications n (% patients)		
	NSAID	7 (7)	-
	Steroids	26 (26)	-
	Biological Treatment	54 (54)	-
	Methotrexate	34 (34)	-

Continuous variables are shown as mean ± standard deviation. Categorical variables are presented as number and proportion. The overall p-value was calculated by the Mann-Whitney non-parametric test for independent samples and by Chi-square test as appropriate

Figure 1. Median T Score stratified by study group. Data are shown as mean and standard deviation. The overall p-value was calculated by the Mann-Whitney non-parametric test for independent samples.

Conclusion: This exploratory study highlights the need to adopt validated questionnaires in clinical practice, and demonstrates that PROMIS is a valid, objective, and standardized instrument that can help nursing staff to better define the consequences of the disease in a patient's daily life.

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THU0619-HPR

PREVALENCE OF DISTAL INTERPHALANGEAL JOINT ULTRASONOGRAPHY FEATURES IN PSORIATIC ARTHRITIS, SKIN PSORIASIS, OSTEOARTHRITIS AND HEALTHY INDIVIDUALS: A CROSS-SECTIONAL STUDY

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Background: Distal interphalangeal (DIP) joint involvement is a feature of both psoriatic arthritis (PsA) and hand osteoarthritis (OA), and nail-changes are features seen both in PsA and nail psoriasis patients without joint involvement (PsO). In both PsA and OA, ultrasonography (US) is used to quantify DIP joint inflammation. **Objectives:** To explore disease-specific US-detected characteristics in the DIP-joints and extensor tendon entheses in patients with DIP-joint OA, PsA, PsO with nail involvement, and healthy controls (HC).

Methods: In PsA, PsO, OA and HC US examination of DIP joints 2-5 and the extensor tendon were performed. The US images were scored for DIP joint grey-scale synovitis, DIP joint Doppler, osteophytes and erosions (grade 0-3) and presence/absence of enthesitis and peritendinitis of the extensor tendon according to OMERACT standards. Prevalences were calculated on all included fingers (i.e. four fingers per participant), and differences in prevalences were tested using Chi-square statistics.

Results: Fifty PsA patients (44% females; mean age: 55y), 13 PsO patients (38% females; mean age 54y), 12 OA patients (100% females, mean age 71y), and 29 HC (52% females, mean age 48y) participated. The prevalences across the diagnosis groups are shown in figure 1, and the distribution of US outcomes was significantly different (highest Chi-square P-value: 0.0127). The PsA group had the largest prevalence of extensor tendon enthesitis (45.5%), peritendinitis (15%), and DIP joint erosions (11%), but also exhibited a considerable prevalence of osteophytes (46%). In the PsO group, the most marked findings were synovitis (33%) and enthesitis (35%). The OA group had the largest prevalence of DIP joint synovitis (67%) and osteophytes (88%) but also 25% prevalence of enthesitis. 24% of the HC group had a grade 1 synovitis.

Figure 1: Prevalence of ultrasound detected changes of DIP-joint synovitis, Doppler activity, osteophytes, erosions, extensor tendon enthesitis and extensor peritendinitis in patients with psoriatic arthritis (PsA), skin psoriasis (PsO), osteoarthritis (OA) and healthy controls (HC).

Conclusion: This cross-sectional study found significant patterns of US findings distributed dependent on the underlying condition. PsA patients were mainly differentiated by the presence of extensor tendon enthesitis and peritendinitis. A high prevalence of enthesitis and synovitis was seen in patients

with DIP joint OA. The high prevalence of enthesitis in PsO is consistent with a preclinical phase of PsA in this group.

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THU0620-HPR MEASUREMENT OF LOW DISEASE ACTIVITY USING THE CLINICAL DISEASE ACTIVITY INDEX (CDAI) VERSUS THE DISEASE ACTIVITY SCORE 28 (DAS 28): IMPACT OF INFLAMMATION MARKERS ON THE COMPARATIVE EFFECTIVENESS OF BIOLOGICS FOR THE TREATMENT OF RHEUMATOID ARTHRITIS

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Background: Biologics for the treatment of rheumatoid arthritis (RA) have different modes of action to target auto-inflammatory processes causing the signs and symptoms of the disease. Different biologics may thus have different effects on inflammatory markers. For instance, previous studies have shown that the interleukin-6-inhibitor tocilizumab (TOC) decreases the level of acute phase reactants (APRs) [1]. Such direct effects on inflammatory markers may lead to an overestimation of clinical response if disease activity is measured via scores including inflammatory markers, such as the Disease Activity Score 28 (DAS 28). The detected changes in disease activity may not adequately reflect the clinical improvement of signs and symptoms.

Objectives: In our study, we compared biologics with each other using two different disease activity scores: the DAS 28 including APRs and the clinical disease activity index (CDAI) excluding APRs. The aim of this study was to assess whether the use of the two different scores affects comparative effectiveness studies on biologics for the treatment of RA.

Methods: We compared results on the comparative effectiveness of biologics using the corresponding thresholds for low disease activity (LDA) for the DAS 28 (< 3.2) and the CDAI (≤ 10). We performed two separate network meta-analyses (NMAs) after a thorough step-by-step evaluation of the similarity, homogeneity and consistency assumptions of the patient populations and the study data.

Our study formed part of a systematic review (including NMAs) that was largely based on clinical study reports and re-analyses of LDA using individual patient data provided by sponsors for studies conducted up to 2017. Thus, the analyses include hitherto unknown data on LDA analysed by means of the CDAI, especially data from older studies. An extensive comparison of DAS 28 and CDAI in different patient populations was possible.

Results: For all analysed patient populations, comparisons of TOC versus other biologics yielded remarkable results: advantages for TOC were found in NMAs using the DAS 28, which were not confirmed in NMAs using the CDAI. For methotrexate (MTX)-naïve patients, using the DAS 28, TOC showed a greater benefit than abatacept (ABA), certolizumab pegol (CZP), and etanercept (ETA), which was not confirmed by the CDAI. In contrast, TOC showed less benefit than adalimumab (ADA) and ETA. For patients after MTX failure and using the DAS 28, TOC showed a greater benefit than ABA, ADA, anakinra (ANA), ETA, golimumab (GOL), and infliximab (INF). With the exception of ANA, these advantages were not confirmed by the CDAI. Similar differences between DAS 28 and CDAI were shown in patients treated with biologics in monotherapy or after failure of biologics.

Conclusion: In comparative effectiveness studies of biologics, the assessment of LDA using the DAS 28 instead of the CDAI leads to a consistent overestimation of the benefit of TOC in all patient populations, regardless of pre-treatment or combined therapy with MTX. The inclusion of APRs in disease activity scores may thus introduce bias. A score excluding inflammatory markers should therefore be used to ensure valid results.

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THU0621-HPR SARC-F SCALE ON SCREENING SARCOPENIA AND PHYSICAL FUNCTION IN PATIENTS WITH KNEE OSTEOARTHRITIS

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Background: Sarcopenia has been defined as a loss of muscle mass and consequently of muscle function. In patients affected by osteoarthritis (OA) a more likely and accelerated development of sarcopenia has been reported. The SARC-F is a simple sarcopenia screening tool includes five assessment items: strength, assistance walking, rising from a chair, climbing stairs, and falls. SARC-F ≥ 4 is defined as sarcopenia.

Objectives: The present study aimed to examine the utility of SARC-F in the patients with knee osteoarthritis.

Methods: Patients with radiographic and clinic evidence of tibiofemoral OA (Kellgren-Lawrence score ≥ 2) were included. Sarcopenia were identified using the SARC-F scale. Patients with a total score 4 and higher than 4 were classified as having sarcopenia. Patients were assessed by The Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC), four-meter walking test, hand grip test, shortened version of the falls efficacy scale-international (the short FES-I) and EuroQol-5 Dimension (EQ-5D). A multiple linear regression model was used to identify independent predictors of SARC-F.

Results: A total 76 patients with median age 61 ranged 55 to 78 years old (72.4% female) were screened in this study (Table 1). Of the sample, 38.1% of patients were sarcopenic as a SARC-F (Figure 1). Through multiple regression analyses, SARC-F scores was significantly associated with four-meter walking test, hand grip, WOMAC-Function, EQ-5D and short FES-I describing between 57% and 63% of the variance (adjusted R²) (Table 2). Also, poor physical performance and grip strength were associated with SARC-F ≥ 4 independently (P<0.005).

Table 1. Summary Table of Characteristics of sarcopenic vs non-sarcopenic patients with knee OA

Measures	Sarcopenic patients with knee OA (n:47) Sarc-F≥4	Non-Sarcopenic patients with knee OA (n:29) Sarc-F<4	p value*
Age, mean(SD)	62.7(6.9)	59.3(6.9)	0.294
BMI, mean(SD)	27.84(9.56)	28.54(8.38)	0.327
WOMAC, mean(SD)	43.52(10.83)	28.06(14.9)	0.001*
GRADE (K-L) med (min-max)	3(2-4)	2(2-4)	0.008*
Hand Grip, mean(SD)	20.33(4.89)	28.22(7.13)	0.001*
4 m Walking Test, mean(SD)	11.88(4.24)	9.55(4.30)	0.001*
EQ-5D, mean(SD)	9.41(1.52)	7.13(1.75)	0.001*
EQ-5D-VAS, mean(SD)	44.31(14.12)	66.90(16.25)	0.001*
Short FES-I, mean(SD)	18.06(9.45)	9.04(5.32)	0.001*
Number of falls the past year, mean(SD)	4.01(1.24)	3.14(2.74)	0.674

*Mann Whitney U test; *p< 0.05; BMI, Body mass index; WOMAC, Western Ontario and McMaster Universities Osteoarthritis Index EQ-5D, EuroQol-5 Dimension; FES-I, Falls Efficacy Scale-International

Table 2. Multiple linear regression analysis for SARC-F

	β	t	P value	95% Confidence Interval (lower-upper bound)
Walking Speed	0.11	1.20	0.23	-0.31/ 0.12
Hand Grip	-0.35	-1.73	0.04	-0.20 / 0.01
WOMAC-Function	0.26	2.31	0.01	0.00 / 0.05
Short FES-I	0.18	1.96	0.01	0.04 / 0.01
EQ-5D	0.22	2.29	0.02	0.02 / 0.39
EQ-5D VAS	-0.24	-2.73	0.001	-0.04 / -0.00
R ² = 0.61				

WOMAC, Western Ontario and McMaster Universities Osteoarthritis Index, EQ-5D, EuroQol-5 Dimension; FES-I, Falls Efficacy Scale-International