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

φMann 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

R² = 0.61

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

Figure 1. Sarcopenic vs non-sarcopenic patients according to sex

Conclusion: In this study, sarcopenia defined by the SARC-F questionnaire has a predictive value of clinical characteristics of patients to predict sarcopenia parameters and poor physical performance in patients with knee OA.

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THU0622-HPR PATIENTS' SATISFACTIONS TO TUMOUR NECROSIS FACTOR INHIBITORS FOR MANAGEMENT OF ANKYLOSING SPONDYLITIS IN KOREA; RESULTS FROM A MULTICENTERED, OBSERVATIONAL, AND CROSS-SECTIONAL STUDY

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Background: An experience of particular treatment is one of the characteristics impacting on patients' decisions to continue, discontinue, or alter their medical treatments.¹ Reports on patients' treatment satisfaction would be weighty when selecting an optimal treatment reflecting the patient's perspective.

Objectives: We aimed to evaluate the treatment satisfaction of ankylosing spondylitis (AS) patients treated with tumor necrosis factor inhibitors (TNF-Is) and identify the factors associated with satisfaction in Korea.

Methods: The study was conducted from July to November in 2018 at 4 hospitals representative in treating AS in Korea. Patients aged ≥19, diagnosed as AS based on 'Modified New York criteria 1984', and treated with current TNF-Is and same type of device for ≥3 months were included. We used 'Treatment Satisfaction Questionnaire For Medication (TSQM)' which is consisted of 4 domains; effectiveness, side effects, convenience, and global satisfaction. Scores (0 ~ 100) of satisfaction indicate the higher the better. Multivariable linear regressions with 95% of statistical significance level was performed to identify related factors.

Results: Enrolled 497 patients (85.3% male, 40.3 years old) were prevalent with AS for mean 10 years and indicated average 3.1 in Bath AS Disease Activity Index (BASDAI). Adalimumab (39.6%) was the most commonly used, followed by etanercept (23.5%), infliximab (21.9%) and golimumab (14.9%). TNF-Is were prescribed at low, regular, and high dose for 24.9%, 70.5% and 4.7% of patients and as subcutaneous with pen type, syringe type, and intravenous injection for 50.9%, 26.8% and 22.3% of patients, respectively. Conventional

disease-modifying antirheumatic drugs (cDMARDs) and steroids were concomitantly used for 5.4% and 8.3% of patients, respectively.

Average score of TSQM was the lowest in convenience amongst 4 domains; 72.2 in effectiveness, 96.9 in side effects, 67.6 in convenience, and 71.4 in global satisfaction. Negative associations were shown between BASDAI and all domains of TSQM. Patients who prescribed TNF-Is at high dose were more satisfied to effectiveness while they were less satisfied to side-effect, as against patients prescribed it at low dose. TNF-Is, use of cDMARDs and steroids were not significantly associated with treatment satisfaction (Fig. 1).

Conclusion: AS patients treated with TNF-Is in Korea were quite satisfied with their treatments. Since the worst satisfaction in the convenience domain was presented amongst 4 domains, more convenient treatment options may be required to enhance the entire satisfaction of patients. With the result of a negative association between disease activity and satisfaction, this study strengthened the previous studies reporting the positive relationship between health improvement and satisfaction.²

References:

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Figure 1. Related factors with treatment satisfaction measured by TSQM

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THU0623-HPR REVISION AND VALIDATION OF THE GERMAN VERSION OF THE SYSTEMIC SCLEROSIS QUALITY OF LIFE QUESTIONNAIRE (SSCQL) WITH MOKKEN SCALE ANALYSIS

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In the validation study, German-speaking SSc patients included in the Swiss *MANagement Of Systemic Sclerosis (MANOSS)* cross-sectional study completed the revised (polytomous) SSCQL. Mokken model was used to test the construct validity of the scale including its subscales. The scalability (*H* coefficient) values of ≥ 0.50 are considered "strong", 0.49 to 0.40 "moderate" and 0.39