

discriminated between high and low risk for RP among patients with high SJC (>5) or high DAS28-CRP, with PPV as high as 57%.

**Conclusions:** High MBDA scores were associated with increased risk for RP in 6 study cohorts, including patients treated with csDMARDs, TNFi and abatacept. Based on high NPVs ( $\geq 93\%$ ), the MBDA score used alone had clinical value for identifying patients with little or no risk of RP. Combining the MBDA score with clinical measures yielded PPVs approaching 60%, suggesting that biomarkers can help stratify patients by their risk for RP.

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#### THU0092 CHRONIC PAIN INCREASES INDEPENDENT OF THE DISEASE ACTIVITY AND DEPRESSION IN FEMALES WITH RHEUMATOID ARTHRITIS

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**Background:** Chronic pain is a key component of rheumatoid arthritis (RA). Although pain is reduced with the control of inflammation at the first years of the disease, pain increases over time with different pathways just as central sensitization. Fatigue, sleep problems and depressive symptoms with chronic pain are common problems in patients with RA (1,2).

**Objectives:** We aimed to investigate the frequency of widespread pain, sleep disorders, fatigue, and depressive symptoms in RA patients. Furthermore discrepancy of these symptoms and disorders were analyzed between female and male RA patients.

**Methods:** One hundred and sixty one RA patients (female: 119, male: 42) and 68 healthy controls (female: 52, male: 16) were enrolled in the study. Widespread pain index (WPI) with nineteen body parts that was identified by 2010 fibromyalgia diagnostic criteria was interrogated. Pain visual analog scale (VAS), Health Assessment Questionnaire (HAQ), Physician global assessment (PhGA), Fatigue severity scale (FSS), Pittsburgh sleep quality index (PSQI), Beck depression inventory (BDI) were evaluated in both RA patients and healthy controls. Morning stiffness (MS), Rheumatoid arthritis quality of life (RAQOL) and disease activity score 28 (DAS28) were assessed in RA patients. Data were analyzed in female and male RA patients.

**Results:** The mean PhGA, HAQ, BDI, FSS, WPI values of RA patients were worse than healthy controls ( $p=0.012, 0.000, 0.008, 0.033, 0.044$  respectively). There was no difference between RA and healthy controls in terms of sleep disorders. The mean age, disease duration, MS, swollen joint count, C-reactive protein, PhGA and BDI were similar in female and male RA patients. WPI, VAS pain, tender joint count, HAQ, RAQOL, FSS, PSQI, and DAS 28 were higher in females (Table 1).

Table 1. Clinical features in female and male RA patients

	Female RA patients (n=119)	Male RA patients (n=42)	p
Widespread pain index	4.70±4.97	2.65±3.99	0.04*
PhGA	2.87±2.16	2.09±1.63	0.08
DAS28	3.39±1.39	2.68±1.11	0.01*
CRP	10.77±13.62	12.59±14.20	0.24
Tender Joint Count	10.92±13.47	6.78±13.09	0.03*
Swollen Joint Count	0.88±2.67	0.31±0.69	0.690
HAQ	1.06±0.83	0.68±0.66	0.04*
RAQOL	14.34±10.06	7.59±8.83	0.00*
FSS	35.57±19.24	22.21±14.41	0.00*
PSQI	8.02±5.58	5.00±4.20	0.00*
BDI	15.71±13.34	11.28±12.56	0.06

PhGA: Physician global assessment, DAS: Disease activity score, CRP: C Reactive protein, HAQ: Health Assessment Questionnaire, RAQOL: Rheumatoid arthritis quality of life, FSS: Fatigue severity scale, PSQI: Pittsburgh sleep quality index, BDI: Beck depression inventory.

**Conclusions:** RA is a disease that increases fatigue, depressive symptoms and widespread pain. DAS 28 scores were higher due to the increased pain scores and tender joint count that are subjective parameters in female RA patients. Pain scores in females are significantly higher than in males, and pain exacerbated by central sensitization pathway in women may lead to sleep disorders and fatigue, but not increase depressive symptoms.

#### References:

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#### THU0093 PERSISTENCE OF POWER DOPPLER ULTRASOUND-DETECTED RESIDUAL SYNOVITIS IN CONSECUTIVE ULTRASOUND EXAMINATIONS IN RHEUMATOID ARTHRITIS PATIENTS IN CLINICAL REMISSION PREDICTS UNFAVORABLE OUTCOME OVER ONE YEAR

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**Background:** Some studies revealed an association of Power Doppler (PD) ultrasound (US)-detected residual synovitis (PDUSS) and risk of relapse and radiographic progression (RP), in individual patients in rheumatoid arthritis (RA). However, the longitudinal relationship between clinical remission and repeated US residual lesions during follow-up is not so well-known.

**Objectives:** The aim of this study was to evaluate the ability of PDUSS in consecutive examinations to predict unfavorable outcome (i.e. clinical relapse or RP) at 1 year.

**Methods:** RA patients  $\geq 18$  years fulfilling 2010 ACR-EULAR criteria, treated with synthetic or biologic (b) DMARDs and in clinical remission (DAS28-ESR  $< 2.6$  and no clinically active synovitis) for less than 6 months, were included in the longitudinal prospective SONORE study (ClinicalTrials.gov identifier: NCT02618954). Clinical and biological characteristics of patients were collected at baseline, and every 3 months during 1 year. RA treatment had to be stable during follow-up. A standard US examination on 40 joints for the presence of synovial hypertrophy and PD signal was performed by an independent investigator blinded to clinical and radiographic data at each visit during 1 year. Presence of US synovitis was defined by a PD signal  $\geq 1$  in at least one joint. Radiographs of hands, wrists and feet were scored at baseline and 1 year. Outcome measures: RP was defined by an increase  $\geq 1$  point of the modified total Sharp score. A relapse was defined by a DAS28  $\geq 3.2$  at  $\geq 1$  follow-up visits AND a change of DMARDs, excluding change due to safety issues; or an increase in the DMARD or Corticosteroid (CS) dosage ( $\geq 5$  mg/d). Baseline variables, including PDUSS and its persistence during the follow-up, were assessed for their association with time to progression to unfavorable outcome using univariate then stepwise multivariate Cox regression analyses to obtain adjusted HRs.

**Results:** The 115 included patients had a mean (SD) age of 58.9 ( $\pm 12.8$ ) years, mean disease duration of 9.3 ( $\pm 9.3$ ) years, a mean duration of remission of 2.1 ( $\pm 2.3$ ) months. 74.8% were female, 79.1% of the patients were anti-CCP positive, 51.4% had erosive disease. The mean DAS28-ESR was 2.03 ( $\pm 0.63$ ). 59.2% received methotrexate, 59.9% bDMARD and 11.7% CS. PDUSS was detected in  $\geq 1$  joint in 75 patients (72.1%) at baseline. 41/75 (54.7%) had persistence of at least one PDUSS during the follow-up. 26 (23.2%) had a relapse (after a mean duration of 9.1 ( $\pm 2.6$ ) months) or a RP at 1 year. In multivariate analysis, persistence of at least one PDUSS during the follow-up (HR=5.24 [1.74–22.5],  $p=0.009$ ) and baseline number of tender joints (HR=1.32 [0.95–1.68],  $p=0.052$ ) were predictors of relapse or RP at 1 year. Duration of remission, other baseline US findings including baseline PDUSS, autoantibodies, and erosive disease had no additional predictive value.

**Conclusions:** Persistence of a PDUSS during the follow-up, rather than baseline PDUSS, predicts unfavorable outcome at 1 year in RA patients in clinical remission. This suggests that initial US findings are not sufficient to justify therapeutic change, but that the persistence of a residual PDUSS requires careful follow-up, and might even potentially merit strategy adaptation.

**Disclosure of Interest:** None declared

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#### THU0094 FACTORS ASSOCIATED WITH RADIOGRAPHIC REMISSION (RR) IN PATIENTS WITH RHEUMATOID ARTHRITIS (RA) WHILE NON-BIOLOGICAL DISEASE MODIFYING ANTI-RHEUMATIC DRUGS (DMARDs) USING

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**Objectives:** To assess the factors associated with RR achievement in patients (pts) with RA while non-biological DMARDs using.

**Methods:** A cohort of 174 pts with RA (50.6% with early RA) was prospectively assessed at baseline and 2 years by the Disease Activity Score (DAS28) and the Sharp-van der Heijde Score (SHS). Mean age at inclusion was 52.0  $\pm$  0.91 yrs, disease duration – 51.3  $\pm$  4.82 month. 82.7% of the pts were women; 62.6% were positive for rheumatoid factor (RF) and 75.9% - for antibodies against cyclic citrullinated peptides (aCCP). Pts were treated with methotrexate (MTX) (mean dose – 11.6  $\pm$  0.29 mg/w, n=157), leflunomide (LF) (19.2  $\pm$  0.28 mg/d, n=95), sulfasalazine (SS) (2 g/d, n=76) or combination of DMARDs (CD) (n=74). After 2 yrs of DMARDs therapy 41 pts (23.5%) reached RR ( $\Delta$ SHS  $\leq 0.5$ ). No one pts using low dose of MTX (7.5 mg/week) achieved remission so they were excluded from further analysis. According to RR achievement in 2 yrs pts were divided into