($p=0.000$), 10.3 for increased CRP ($p=0.002$) and 11.3 for CF ($p=0.002$). STIR MRI imaging assessment proved acceptable sensitivity (79%), excellent specificity (94%), and high PPV (88%) for SPMRI ($p<0.001$). WPMRI displayed better sensitivity (87%) nonetheless, specificity (67%) and PPV decreased (59%) ($p<0.001$). T1 MRI examination showed reasonable sensitivity (72%) excellent specificity (97%) and high PPV (85%) for erosion ($p<0.001$). Sensitivity for backfill was lower (32%), but specificity (100%) and PPV (100%) were excellent ($p<0.001$). Association, erosion and SPMRI pointed out a highly strong specificity (100%) and PPV (100%), however decreased sensitivity (51%) ($p<0.001$). Association, erosion and WPMRI significantly increased specificity (98%) and PPV (94%), although slightly decreased sensibility (64%) ($p<0.001$). Inter-observer agreement was higher for STIR MRI performance 0.70(95%CI 0.59; 0.80), and lower for T1 0.47 (95% CI 0.35; 0.59).

Conclusion: At the onset, IBP, increased CRP, CF and IBD might be good indicators for selecting patients with a higher likelihood of positive diagnosis. Strongly positive SI MRI imaging is highly specific, brings acceptable sensibility and may be an excellent tool for early diagnosis of SPA. Weakly positive MRI STIR imaging might be helpful to detect patients with early SPA but lacks specificity. Early detection of erosion adds additional value to the STIR MRI reading, enhancing the specificity and increasing the probability of positive SPA diagnosis.

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SAT0359

THE AGREEMENT BETWEEN CT AND BONE SCINTIGRAPHY IN DETECTING OSTEOARTICULAR LESIONS IN SAPHO SYNDROME

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Background: Computed tomography (CT) and ^{99m}Tc-MDP bone scintigraphy are commonly used to detect osteoarticular lesions and the typical bull's head sign of the anterior chest in the diagnosis of Sapho syndrome [1,2]. Since bone scintigraphy visualizes high radioactive uptake which basically indicates inflammatory lesions, and CT demonstrates the structural lesions in bones and joints, the findings of the two modalities usually do not correspond with each other [3,4]. However, little is known about the agreement between CT and bone scintigraphy on the findings of osteoarticular lesions in the patients of Sapho syndromes.

Objectives: To determine the agreement between CT and bone scintigraphy on the findings of osteoarticular lesions in Sapho syndrome.

Methods: A total of 68 patients who met the standard criteria of Sapho syndrome proposed by Kahn and Khan [5] with simultaneous (the interval <1 month) whole spinal CT scan and bone scintigraphy were recruited in Peking Union Medical College from 2015 to 2016. Every CT or scintigraphy result was evaluated by at least two specialists independently and blindly. CT scan and scintigraphy results of all patients were evaluated for whether the following osteoarticular structures were involved: the clavicle, sternoclavicular joints, sternocostal joints, sacroiliac joints and all vertebra. The respective involvement frequencies and the kappa value of agreement were calculated.

Results: Involved vertebra on the CT scan present as corner lesions or endplate lesions. Involved joints on the CT scan present as narrowed articular spaces or damaged articular facets. CT scan is more sensitive to detect the involvement of vertebra and sternocostal joints, but less sensitive for sternoclavicular and sacroiliac lesions than bone scintigraphy. Kappa value was calculated to assess the agreement between CT and bone scintigraphy (Table. 1). It ranges from 0.103 to 0.593 over different structures, indicating a slight to moderate agreement between the two tests.

Table 1. Agreement analysis between CT and bone scintigraphy

Structures/ Locations	Involvement frequency on CT	Involvement frequency on bone scintigraphy	Measure of agreement, κ value	P value
Cervical vertebra	14/68	2/68	0.209	0.055
Thoracic vertebra	29/68	15/68	0.103	0.343
Lumbar vertebra	33/68	19/68	0.464	0.001
Sacral vertebra	20/68	3/68	0.199	0.006
Sternal angle	27/68	24/68	0.593	< 0.001
Clavicle	3/68	4/68	0.248	0.039
Left sternoclavicular joint	27/68	36/68	0.274	0.019
Right sternoclavicular joint	26/68	40/68	0.209	0.06
Left sternocostal joint	40/68	6/68	0.024	0.683
Right sternocostal joint	39/68	8/68	0.075	0.283
Left sacroiliac joint	8/68	14/68	0.145	0.208
Right sacroiliac joint	9/68	18/66	0.415	< 0.001

The two tests have comparable detection rates for the involvement of sternal angle with a highest kappa value (0.593). But there are huge differences at other structures with extremely low kappa value, which suggests the routine bone scintigraphy for diagnosis cannot replace a CT scan in terms of evaluating osteoarticular lesions.

Conclusion: The agreement between CT and bone scintigraphy was poor, indicating an importance of implementing routine CT tests in Sapho syndrome.

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Psoriatic arthritis

SAT0360

REMISSION IN PSORIATIC ARTHRITIS: DEFINITION AND PREDICTORS

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Background: No validated definition of remission exists for psoriatic arthritis (PsA) to date. We previously identified 17.6% of our patients as

Table 1. Weibull regression model for first remission, adjusted by gender and disease duration

Covariate	Multivariable full model		Multivariable reduced model	
	p-value	HR 95% CI	p-value	
Age	1.02 (0.94, 1.11)	0.53		
Age at Diagnosis of PsA	0.98 (0.90, 1.07)	0.7048		
BMI	0.97 (0.93, 1.00)	0.0824	0.96 (0.92, 0.99)	0.02
Axial	0.85 (0.85, 1.99)	0.2276		
NSAIDs	0.71 (0.46, 1.10)	0.1224		
DMARDs	1.14 (0.74, 1.75)	0.5592		
Biologics	1.69 (1.11, 2.57)	0.0150	1.73 (1.15, 2.61)	0.009
Diabetes	0.57 (0.24, 1.34)	0.1984		
Infection	1.60 (1.00, 2.56)	0.0518		
Depression/Anxiety	0.60 (0.31, 1.16)	0.1302		
Elevated ESR	0.68 (0.41, 1.13)	0.1400		
Gender (male vs female)	1.10 (0.72, 1.68)	0.6696	1.10 (0.73, 1.67)	0.64
Disease Duration	0.95 (0.87, 1.04)	0.2967	0.97 (0.95, 1.00)	0.05

CI – confidence interval; BMI-Body Mass Index; NSAIDs- nonsteroidal anti-inflammatory drugs; DMARDs- disease modifying anti-rheumatic drugs; ESR- erythrocyte sedimentation rate

having remission (no actively inflamed joints for 12 months). However, we did not take into account the other domains of the disease.

Objectives: We aimed to test the concept of remission as the absence of disease manifestations in PsA, determine the frequency of remission in our PsA cohort, and identify predictors for remission.

Methods: PsA patients followed between 2000 and 2015 were included. Patients are assessed at 6- to 12-month intervals according to a standard protocol, which includes the information necessary for minimal disease activity (MDA) assessment. Remission was defined as a visit that patients had no tender or swollen joints, no inflammatory back pain, no tender entheses sites, minimal skin involvement with BSA<1%, patient pain on visual analog scale (VAS) score of <15, patient global disease activity VAS score of <20, Health Assessment Questionnaire (HAQ) score <0.5. We used imputation to determine remission status for each patient and did a sensitivity analysis including only visits with all information available. We fit a Weibull regression model with interval/right censored and left truncated data adjusted for sex and disease duration at baseline. Both multivariable full model and reduced model with Hazard Ratio (HR), 95% confidence interval (CI) estimates, and p-value are provided in Table 1.

Results: 985 patients (57% males, mean age 47.4 yrs Table) were included. Using imputation 175 (18.2%) patients had remission at least once and 107 (10.9%) achieved sustained remission. In the sensitivity analysis, 109 (10.9%) patients achieved remission at least once, and 48 (4.9%) sustained remission for 2 consecutive visits. Using baseline variables with imputation, only BMI was significant and lowered the chance of remission. In the sensitivity analysis no baseline variables were significant. Using a model with time varying covariates higher BMI lowered the chance of remission, while use of biologics increases the chance of remission. Similar results were obtained with the sensitivity analysis. Only biologics predicted sustained remission.

Conclusion: We defined remission as a state of no clinical activity. Remission occurred in 18% of patients with PsA at least once and was sustained in 11%. High BMI reduced and use of biologic agents increased the chance of sustained remission.

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SAT0361

CARDIOVASCULAR RISK FACTORS AND COMORBIDITIES IN PATIENTS WITH PSA, RA AND THE GENERAL POPULATION

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Background: Patients with psoriatic arthritis (PsA) have previously been reported to have increased cardiovascular morbidity and mortality compared to psoriasis, rheumatoid arthritis (RA) and the general population

(GP). Obesity has been linked to an increased risk of developing PsA and to be higher in patients with PsA compared to those with psoriasis, RA and GP. Furthermore, obese patients with PsA are more likely to have high disease activity and a reduced response to treatment. Few studies have reported on life style data in combination with traditional cardiovascular risk factors in patients with PsA compared to GP and RA in the same setting.

Objectives: We aimed to assess cardiovascular risk factors in patients with PsA compared to age- and sex matched RA and GP subjects.

Methods: We performed a cross-sectional study in the Western Sweden Health Care Region (WSHCR). All Individuals who were ≥18 and had at least one ICD-10 diagnosis for PsA (ICD-10 codes M073) or RA (ICD 10 codes M059 and M060), at a visit at any of three rheumatology clinics in the WSHCR during a two-year period (Jan 2015 through Feb 2017) were identified. From these we randomly selected PsA patients (n=1200) and RA patients (n=1246), with equal sex distribution and they were sent a postal questionnaire. Data for non-responders were limited to age and sex.

The questionnaire included questions on demographics, comorbidities, smoking, alcohol consumption, physical activity, medications and disease specific entities. The National public health survey from 2015, "Health on equal terms", which was sent to randomly selected citizens in Sweden aged 16-84, was used as a sex- and aged matched reference population with five controls matched per RA and PsA case. Obesity was defined according to WHO standards as BMI ≥30. Daily smoking, alcohol consumption (≥5 standard drinks of alcohol per week) and physical activity (≥3 hours per week) were also analyzed.

Results: Response rates were n=687 (57.3%) for PsA and n=742 (59.6%) for RA. After age- and sex matching there were 432 individuals with PsA, 431 with RA and 4314 matched subjects from the general population left for analyses. Mean age was 61.1 (SD 12.0) years and 42% males in all three groups. Patients with PsA were more frequently obese, compared to both GP (p<0.001) and RA (p=0.012). Smoking was more prevalent in RA and PsA than in GP. In addition, hypertension was more common in PsA compared to RA (p=0.044) and GP (p<0.001). Diabetes was also more prevalent in PsA than in GP (p=0.007), as was hyperlipidemia (p=0.039). Patients with PsA drank more often ≥5 standard drinks of alcohol per week than patients with RA did (p=0.046).

Conclusion: In PsA, obesity and comorbidities related to CVD were increased above what was seen for both RA compared to the GP. This highlights the need to address these partly modifiable factors in particular for patients with PsA

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Table 1. characteristics of PsA, RA and GP subjects

	PsA, n=432	RA, n=431	GP, n=4314	p-value (PsA vs RA)	p-value (RA vs GP)	p-value (PsA vs GP)
BMI, mean (std)	27.4 (4.8)	26.3 (4.6)	26.4 (4.3)	0.001	0.705	<0.001
BMI≥30, n(%)	98 (22.7)	69 (16.0)	739 (17.1)	0.012	0.555	<0.001
Daily smoker, n(%)	37 (8.6)	55 (12.8)	N/A	0.046	N/A	N/A
≥5 standard drinks of alcohol per week, n(%)	92 (21.3)	69 (16.0)	N/A	0.046	N/A	N/A
Physical activity ≥3 hours per week, n(%)	224 (51.9)	205 (47.6)	2354 (54.6)	0.208	0.005	0.289
Diabetes, n(%)	52 (12.0)	42 (9.7)	356 (8.3)	0.167	0.301	0.007
Myocardial infarction, n(%)	28 (6.5)	25 (5.8)	N/A	0.501	N/A	N/A
Stroke, n(%)	16 (3.7)	15 (3.5)	N/A	0.675	N/A	N/A
Gout, n(%)	25 (5.8)	19 (4.4)	N/A	0.199	N/A	N/A
Kidney disease, n(%)	9 (2.1)	11 (2.6)	N/A	0.814	N/A	N/A
Hypertension, n(%)	195 (45.1)	170 (39.4)	1350 (31.3)	0.044	<0.001	<0.001
Hyperlipidemia, n(%)	94 (21.8)	70 (16.2)	N/A	0.039	N/A	N/A