regression analysis, the PD signals of the flexor tendons and collateral ligament were independent contributors to a diagnosis of dactylitis (Figure 1).

Conclusions: Development of active inflammation of enthesis organ determined by ultrasound is supposed to associate importantly with the judgment as dactylitis in patients with uSpA.

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AB1036   **PREDICTIVE VALUE OF BASAL REACTANTS IN AN EARLY ARTHRITIS CLINIC. DOES ESR ELEVATION CRITERIA MAKE A DIFFERENCE?**

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Background: The presence of high acute phase reactants may help the diagnosis and classification of patients with rheumatoid arthritis, specially in seronegative patients.

Objectives: Our objective was to establish if the presence of high basal reactants in early arthritis may help to establish the diagnosis of rheumatoid arthritis following criteria of ACR 1987 (which does not include positive reactants in diagnostic criteria). at 12 months of follow-up.

Methods: The presence of acute phase reactants at the baseline visit (elevated CRP and elevated ESR according to two different criteria) was studied in a population of 70 patients referred to the arthritis clinic with criteria for suspicion of early arthritis to meet at least one of the Following criteria: a) Swelling in 2 or more joints b) Pain in MCFs, MTFs and/or wrists c) Morning stiffness greater than 30 minutes (* SERAP study criteria), with <12 months of evolution of symptoms. None of the patients had previous diagnosis of rheumatoid arthritis or other inflammatory joint disease nor had previous treatment with steroids or DMARDs. The presence of high VSG (mm/h) was considered according to two criteria: a) ESR 1: VSG>20 or b) ESR 2 (criterion according to age and sex) (1): Age ≥50 years ESR>20 in men and ESR>30 in women; Age <50 years of age, ESR>15 mm/h in men and>20 in women.Statistics: Chi-square or Fisher test (for any value <5), Odds ratio (OR) calculation.

Results: 70 patientes, 45 women (64,3%), x age 51,57±16,08 y (18–85) were included, x disease duration 3,47 meses ± 2,59 (0,53–11.73); 48/70 (68,5%) RF and ACPA negative. 49 patients meet ACR 1987 criteria, but 5 were finally classified in non-RA group because they meet criteria of other inflammatory chronic articular conditions (eg. psoriatic arthritis RA-like). 45/70 patients had high baseline CRP (64.3%), ESR 1 38/70 (54.3%) and ESR 2 35/70 (50%). Basal CRP>5 showed statistically significant differences for RA diagnosis (ACR 1987 criteria) p=0.003, OR =4,64 (1.62–13,24) but basal positive ESR 1 criteria did not (p=0.122). Basal positive ESR2 showed significant differences for diagnosis of RA, with p=0.036, OR =2,78 (0,99–7,47). In the subgroup of seronegative patients, basal CRP could predict ACR 1987 RA diagnosis at 12 months follow-up p=0,019, OR 4,2 (1,23–14,36), but ESR (both ESR1 and ESR2) not (p=1,000). If the 5 patients ACR 1987 meeting criteria RA-like but diagnosed at other inflammatory conditions were included, the results are similar but ESR2 reached a better confidence interval p=0.036, OR 3,63 (1,20–10,94).

RA ACR 1987 CRITERIA 44 P.T		RA YES	P univariate	OR	IC 95 %
CRP	YES	34/45 (75,5%)	0,003	4,64	(1,62-13,24)
	NO	10/25 (40%)			
ESR1	YES	30/38 (78,9%)	0,122 NS	-	-
	NO	19/32 (59,4%)			
ESR2	YES	26/35 (74,3%)	0,048	2,78	(0,99-7,47)
	NO	18/35 (51,4%)			
CRP seronegative	YES	18/28 (64,3%)	0,019	4,2	(1,23-14,36)
	NO	6/20(30%)			

ACR 1987 CRITERIA (AR+AR-LIKE) 49 P.T		RA YES	P univariate	OR	IC 95 %
CRP	YES	37/45 (82,2%)	0,006	5,01	(1,67-14,98)
	NO	12/25 (48%)			
ESR1	YES	30/38 (78,9%)	0,116 NS	-	-
	NO	19/32 (59,4%)			
ESR2	YES	29/35 (82,8%)	0,036	3,63	(1,20-10,94)
	NO	20/35 (57,1%)			

Conclusions: The presence of elevated basal CRP>5 may be used as a factor that helps to predict the diagnosis of rheumatoid arthritis according to ACR 1987 criteria for RA. The baseline elevated ESR according to the sex and age criterion could be useful as a predictor factor for the diagnosis of rheumatoid arthritis, while the VSG criterion>20 in all patients does not demonstrate differences in the study between the two groups with final diagnosis AR and non-RA. In seronegative patientes, only CRP demostrated predictive value but ESR not.

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AB1037   **INTEROBSERVER RELIABILITY OF KNEE OSTEOARTHRITIS LESIONS USING MUSCULOSKELETAL ULTRASOUND: DIFFERENCES BETWEEN STATIC VERSUS REAL TIME READING**

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Background: Musculoskeletal ultrasound (MSU) is an imaging technique proved to be valid in several musculoskeletal conditions. In osteoarthritis (OA) it allows the identification of inflammation and structural damage. However, MSU is an operator dependent method and its widespread use has been hampered by questions related to the reliability of both, image acquisition and image interpretation.

Objectives: The objective of this study was 1) to evaluate the interobserver reliability of knee OA according to the definitions used by the OMERACT reliability exercise of inflammatory and structural abnormalities in patients with knee osteoarthritis using ultrasound and 2) to compare the interobserver reliability on previous collected images (static reading, thereafter) versus after the acquisition and interpretation of images in real time (real time reading, thereafter).

Methods: A reliability exercise based on the reading of US images was conducted by two experienced rheumatologists in MSU. A set of 59 images of both, normal and OA knee lesions were collected for the static reading. A set of 20 knees were scanned by each rheumatologist for the real time reading. Dichotomous and semi-quantitative scoring (0–3) was performed for the presence of damage on the condrosynovial margin, osteochondral margin and matrix of the throchlear cartilage, osteophytes at the lateral and medial femoral condyle and proximal tibia, medial and lateral meniscal extrusion and Baker's cyst. Interobserver reliability was calculated by the Cohen's kappa coefficient.

Results: Interobserver reliability scores for the static reading were good for cartilage damage, meniscal extrusion and Baker's cyst, while they were excellent for the presence of osteophytes. The scores for the real time reading were poor to moderate for cartilage damage, osteophytes and Baker's cyst and good for meniscal extrusion. These results are shown in Table 1.

Table 1. Interobserver κ values for agreement of the static and real time reading of US abnormalities in knee osteoarthritis

Lesion	Static reading κ (SE)	Real time reading κ (SE)
Condrosynovial margin	0,588 (0,180)	0,588 (0,180)
Cartilage matrix	0,732 (0,118)	0,317 (0,143)
Osteochondral margin	0,658 (0,148)	0,251 (0,163)
Medial condyle osteophyte	0,538 (0,176)	0,412 (0,213)
Lateral condyle osteophyte	0,792 (0,194)	0,385 (0,228)
Medial tibial osteophyte	0,865 (0,129)	0,490 (0,96)
Lateral tibial osteophyte	0,744 (0,236)	0,432 (0,213)
Medial meniscal extrusion	0,673 (0,204)	0,704 (0,159)
Lateral meniscal extrusion	0,633 (0,234)	0,573 (0,185)
Baker's cyst	0,714 (0,256)	0,490 (0,960)

Conclusions: This exercise shows that the interobserver reliability of MSU for the detection of knee OA lesions is widely different depending on the type of reading (static versus real time). Although MSU seems to be reliable for the detection of knee OA lesions, caution needs to be taken in the interpretation of published data regarding the type of reading exercise performed.

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AB1038   **INFLUENCE OF AGE ON ENTHESIS IN TUNISIAN PEOPLE: AN ULTRASOUND STUDY**

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Background: By aging, many changes occur in the different components of the locomotor system, leading to a pathological situation such as osteoarthritis or remaining totally asymptomatic.

Objectives: The aim of the current study was to compare,via ultrasound, the entheseal changes in two groups of people having different ages by calculating a modified Madrid sonography enthesis index.

Methods: The study was conducted in the rheumatology department of Mongi Slim hospital in Tunisia, between June 2015 and December 2016, including 17 healthy subjects. We indentified two groups: (G1) 9 persons aged >50 years [51–68] and (G2) 8 persons aged ≤50 years-old [37–50].

All the included persons underwent an enthesis ultrasound exploration (Esaote-MyLab 60 machine and a 13–18 MHz linear array transducer) by a rheumatogist

experimented in ultrasound. Five enthesis locations bilaterally (distal Achilles tendon, distal andproximal patellar ligaments, distal quadriceps, and brachial triceps tendons) in each person were explored.The following elemental lesions of enthesis were evaluated: thickness, presence of calcifications, erosions,enthesophyte, loss of fibrillar patternand power Doppler signal.

The calculated index was compared by Mann-Whitney U test between cases and controls. The significance level was set at 5%.

Results: In our study population, the median age was 51.8±2.3 years and the median body mass index was 30±1 kg/m^2. This last was similar between the two groups. All included subjects were female.

The total enthesitis index was higher in G1 (6.67±0.91)than G2 (3.50±0.73) with a statistically significant difference (p=0.01).

Considering each evaluated enthesis, the distal patellar ligament score was significantly higher in the G1 (1.67±0.55 vs 0.25±0.16 with p=0.03). For the other enthesis, there was no significantly difference between the 2 groups.

Conclusions: The distal patellar ligament enthesis changes shown in older persons may be the traduction of a silent-stage of knee osteoarthritis.

Disclosure of Interest: None declared

RELATIONSHIPS BETWEEN SONOGRAPHIC AND ELECTROPHYSIOLOGICAL MEASURES IN PATIENTS WITH IDIOPATHIC CARPAL TUNNEL SYNDROME WAITING FOR SURGERY

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Background: Sonography is a diagnostic tool with great development in diagnosing entrapment neuropathy. It's an easy, painless, fast, non-invasive technique and can explore how the nerve's morphology and pathologies are associated. An electroneurogram is used to assess the intensity of nerve involvement.

Objectives: To determine the relationship between the intensity of nerve involvement by electroneurogram and the measurement of the cross-sectional area (CSA) of the median nerve by sonography in patients with idiopathic carpal tunnel syndrome (CTS) waiting for surgery.

Methods: 56 wrists of 39 consecutive patients waiting for surgery were tested, however 5 were excluded because were found to have anatomic variants (4 bifid nerves, 2 median arteries) and 1 fybrolipoma. Therefore, the final sample was 51 wrists of 37 consecutive patients (11 male and 26 females), with a mean age of 59.2 years (26–85), all with electrophysiologically confirmed idiopathic CTS. Patients were classified by their electrophysiologic grade. The median nerve cross-sectional area at proximal and distal carpal tunnel was measured using high frequency ultrasound.

Relationships between CSA, the severity of the electrophysiologic grade and the duration of symptoms were analysed. Also, a median nerve morphological characteristics examination (hipoecogenicity, loss of fascicular structure, Power Doppler signal and anatomical variants) was undertaken.

A comparison between CSA and the severity of the electrophysiologic grade was made using an independent T test and the connection between CSA and the duration of symptoms was calculated using ANOVA test.

Results: Patients were classified by their electrophysiologic severity grade (8 mild, 13 moderate, 29 severe and 1 very severe). The mean ultrasound area of distal medial nerve was 8.7 mm^2 in mild-moderate and 9.2 mm^2 in severe-very severe cases (p=0.52). The average of proximal CSA was 11.6 mm^2 in mild-moderate and 14.1 mm^2 in severe-very severe cases with statistical signification differences (p=0.026). Relationship between CSA and symptom's duration wasn't identified. In 89.2% of the cases, hipoecogenicity and the loss of fascicular structure were observed but no cases were found to show positive Power Doppler signal.

Conclusions: The most valid and relevant parameter regarding the electroneurogram in the diagnosis of CTS is CSA at proximal carpal tunnel by sonography. A cross-sectional area measuring more than 9–10 mm^2 has been suggested to be pathologic and our study confirms these results. While the electroneurogram is the gold-standard method in the diagnosis of nerve involvement severity, a sonography could improve the diagnostic sensibility and give information about nerve's morphology and associated pathologies.

Disclosure of Interest: None declared

CLINICAL UTILITY OF BONE SCINTIGRAPHY FOR INFLAMMATORY ARTHRITIS

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Background: Bone scintigraphy is often used in the workup of patients with rheumatological disease, in particular for the investigation of inflammatory arthritis. It also has a role in the investigation of malignancy and fractures. As an imaging technique, it is very sensitive but not specific for inflammation. The most common technique used is triple phase scintigraphy, with the 2nd phase (blood pool phase) being the most useful for identifying inflammation.

Objectives: To evaluate the clinical utility of bone scintigraphy in the workup of patients with rheumatological disease, in particular for inflammatory arthritis.

Methods: This was a retrospective study of patients seen in the rheumatology outpatients between January 2011 and July 2014, who had bone scintigraphy as part of their workup. Their clinical record was reviewed to obtain pre- and post-test clinical diagnoses, bone scintigraphy reports and investigations (ESR/CRP, rheumatoid factor/CCP antibodies). For patients who had followup at one year we recorded their clinical diagnosis at this time.

Results: A total of 226 patients had bone scintigraphy, with a median age of 54 years. 63% were female.

The main indication for bone scintigraphy was to assess for inflammation in 194 patients. For this group, the most common pre-test diagnosis of inflammatory arthritis (41%), followed by degenerative arthritis (36%), unclear diagnosis (20%) and mixed inflammatory and degenerative arthritis (3%).

Overall, 49% (n=95) of patients had their diagnosis changed after bone scintigraphy.

The pre-test diagnosis was compared to bone scintigraphy findings with the highest confirmatory rate for degenerative arthritis (67%), followed by inflammatory arthritis (49%) and mixed arthritis (40%).

Bone scintigraphy findings were also compared to post test diagnosis with the highest confirmatory rate for degenerative arthritis (91%), followed by inflammatory arthritis (70%) and mixed arthritis (14%).

There was no significant association between patient factors (age, gender, ESR/CRP, RF/CCP) and having confirmatory or conflicting bone scintigraphy findings.

The post test diagnosis was compared to the diagnosis at one year, with the diagnosis being unchanged in 84% for inflammatory arthritis and 45% for degenerative arthritis.

Conclusions: This study showed that bone scintigraphy lead to a change in diagnosis in a large proportion of patients and was better at confirming degenerative arthritis or ruling out inflammatory arthritis.

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ULTRASONOGRAPHY OF NORMAL MUSCULOSKELETAL STRUCTURES IN 100 SECTIONS: A BOOKLET AND A CD-ROM

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Objectives: To present a booklet and a CD-ROM with a mini-atlas including 100 sections illustrating the normal ultrasound musculoskeletal anatomy.

Methods: We performed an ultrasound examination of large and small joints of the medical staff not suffering from any musculoskeletal disorder. Ultrasound examination was performed using a high-frequency linear probe (Toshiba Xario®, frequency (8–14 MHz) in B mode. Finally, for the sake of clarity of the presentation of this library, we presented each image accompanied with another showing the valid positioning of the probe and an annotated schema for each section made.

Results: We present in the form of CD-ROM and booklet a photo library of a mini-atlas.

Section 27 : Cross-section of the flexor digitorum superficialis and profondus tendons