those patients loosing DAS28-ESR remission over time: 58 patients lost DAS-ESR remission at least once during the 4 follow-up visits. Surprisingly, 24% (3 months), 36% (6 months), 24% (9 months) and 28% (12 months) of the patients still fulfilled the Boolean remission criteria. The only plausible reason for failing DAS28-ESR remission but staying in ACR/EULAR remission is an isolated elevation of the ESR, not accompanied by increased signs and symptoms of disease. Indeed all patients loosing DAS28-ESR remission but staying in ACR/EULAR Boolean remission had an elevated ESR equal or higher than 15 mm. However, if DAS28 scores were calculated by C-reactive protein in the same patients, they all fulfilled remission criteria.

Conclusions: DAS28-ESR remission can be missed even if a patient fulfils the more stringent ACR/EULAR Boolean remission criteria. The reason for this remarkable constellation is an elevated erythrocyte sedimentation rate without any clinical symptoms. Hence, isolated elevations of erythrocyte sedimentation rate should be seen critical. These data show the limitations of individual instruments to assess remission in RA and show that interpretations of the erythrocyte sedimentation rate need to be done in the clinical context

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AB0253 RAPID REMISSION DURING THE FIRST YEAR IN EARLY ACTIVE RHEUMATOID ARTHRITIS IS ASSOCIATED WITH BETTER 5 YEARS STRUCTURAL DAMAGE OUTCOMES

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Background: Remission is arguably the best and ultimate therapeutic goal in early rheumatoid arthritis (ERA). ERA patients who reach rapid and sustained remission are likely to retain good radiographic outcomes.

Objectives: The aim of this study was to evaluate the radiographic progression and the newly pathological joints in a Belgian ERA cohort during a 5 to 15 years follow-up and to correlate the Sharp score index with different indices of clinical remission observed during the first year.

Methods: This was a retrospective analysis of mean (95% CI) change from baseline (BL) to 5 years Sharp/Van der Heijde (SVdH) scoring according to DAS28, SDAI, CDAI and ACR/EULAR Boolean remission scores for patients at Month 3, 6 and 12. Newly pathological joint defined by a SVdH score of 0 at baseline and a score greater than or equal to 1 at follow up were analysed as a secondary objective. 133 ERA patients naïve to DMARDs therapies were analysed (100 women and 33 men) with a mean age $\pm$ SD (49.9 $\pm$ 13.3), mean DAS 28-CRP (4.89 $\pm$ 1.3), mean HAQ (1.25 $\pm$ 0.67), mean SDAI (28.4 $\pm$ 15.5), mean CDAI (25.8 $\pm$ 14.8) and mean SVdH (6 $\pm$ 14). Differences were statistically tested using t tests.

Results: ERA patients were divided in 2 groups: "Xrays Stable" if the delta of SVdH score was <10 (n=90) or "Xrays Progressive" if the delta of SVdH score was >10 (n=43). As expected, presence of ACPA and baseline erosion were significantly higher in the Xrays progressive group. No significant baseline characteristics differences were observed for DAS28-CRP, CDAI, SDAI, HAQ. smoking status, swollen joint count or CRP.% of patients reaching DAS 28CRP, SDAI, CDAI and Boolean remission rates observed at 6 months were statistically significant different between groups (fig). There was no significant difference in clinical responses between subgroups of patients who developed new pathological joints and those who did not.

Abstract AB0253 – Figure 1

Conclusions: These results demonstrate that remission is an important therapeutic goal to protect joint damage in ERA. All remission criteria were able to predict the radiological prevention. The identification of a new pathologic joint is not associated with lack of response.

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AB0254 THE IMPACT OF THE PATIENT GLOBAL ASSESSMENT VARIATION ON THE DAS 28 VALUE

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Background: Rheumatoid arthritis (RA) is the most frequent chronic inflammatory rheumatism. The DAS 28 is a disease activity measure method used to assess RA activity. It is a composite score taking into account 4 items: the number of swollen joints/28, the number of tender joints/28, the erythrocyte sedimentation rate (ESR) or C reactive protein (CRP) rate, the patient global assessment (PGA) indicated on a 0–10 cm visual analogue scale (VAS) with 'not active at all' and 'extremely active' as anchors. The DAS28 determination is very important since it guides the therapeutic decision.

Objectives: The aim of this study was to determine the different ways of asking about the PGA and to assess the impact of its value variation on the calculation of the DAS 28.

Methods: In order to determine how to evaluate the GPA, a questionnaire including 4 propositions was asked to a cohort of Tunisian rheumatologists:

1. how do you assess your health status this past week?
2. what is the degree of the disease impact in your life this last week?
3. what is the degree of the disease activity this last week?
4. other

Then, a DAS 28 calculation was proceeded according to the different choices of GPA question method for 10 Tunisian patients.

Results: The questionnaire was proposed to 37 rheumatologists, 15 working in the private sector and 22 in the public sector. These latter were 9 assistants, 3 professors, 5 specialist doctors and 5 associate professors. The first, second, third and fourth propositions were respectively chosen by 2, 14, 19 and 2 physicians. Subsequently DAS 28 was calculated. In the table 1 below, the variation of the DAS 28 value according to the choice of the PGA method is shown:

Abstract AB0254 – Table 1

Patient	DAS 28 (PGA1)	DAS 28 (PGA2)	DAS 28 (PGA3)	DeltaDAS 28(DAS28 max-min)
1	2.95	2.95	2.81	0.14
2	2.53	2.67	2.67	0.14
3	2.1	1.96	1.96	0.14
4	5.82	5.82	5.54	0.28
5	5.30	5.30	5.16	0.14
6	2.87	2.87	2.87	0.00
7	8.22	8.22	8.22	0.00
8	4.97	5.11	5.11	0.14
9	7.49	7.35	7.63	0.14
10	2.03	2.17	1.89	0.28

Conclusions: The GPA question is a subjective item taken into account for the calculation of the DAS 28. Despite the different ways of asking about it, our study showed that this factor have no real impact on the DAS28 value variation since it doesn't exceed 0.6. DAS28 remains a reliable tool in the clinical practice.

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AB0255 DOES MENOPAUSE AFFECT DISEASE ACTIVITY OF RHEUMATOID ARTHRITIS(RA)? AN ANALYSIS FROM THE NINJA COHORT IN 2016

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Background: Early menopause may be a risk of developing RA¹. Although there are many reports about menopause and the onset of RA, it is not yet clear how the disease activity of RA differs for each generation including menopause.

Objectives: To clarify how disease activity differs for each generation, especially in menopausal period.

Methods: Using the Japanese large RA cohort database (NinJa:National database of Rheumatic Diseases in Japan) of 2016, we divided 12257 RA females into three groups of age (under 44 years old=1, 45 to 55 years old=2, defined as a menopausal group, over 56 years old=3) and analysed them cross-sectionally. We conducted a one-way ANOVA on disease activity indexes such as Tender joint count (TJC), Swollen joint count (SJC), DAS28, HAQ-DI.

Results: Table 1 shows the number of people per group, the duration of disease, the titer of RF/ACPA, and the proportion of drugs used. The average usage of prednisone and the use of biologics was the most common in group 1. In table 2, TJC was the largest in group 2 ($p<0.01$). Furthermore, the difference between groups seen in TJC tends to be larger than TJC 28. There was no significant difference in SJC (SJC28) between three groups. Other disease activity indicators (ESR, CRP, DAS 28, HAQ-DI) were the largest in group 3 ($p<0.01$) and the percentage of Boolean remission was also lowest in group 3 ($p=0.02$).

Abstract AB0255 – Table 1. Characteristics of the three age groups

group	1	2	3	P-value
Number of patients	1071	1699	9487	
Symptom duration, years	8.2	10.5	15.4	$p<0.01$
RF titer, (IU/mL)	186	233	254	$p=0.06$
ACPA titer, (U/mL)	90	102	132	$p<0.01$
On NSAIDs use, n(%)	392 (36%)	710 (41%)	3668 (38%)	$p<0.01$
Daily mean prednisone dose, (mg/day)	4.31	3.95	3.86	$p=0.01$
On DMARDs, n(%)	984 (91%)	1623 (95%)	8835 (93%)	$p<0.01$
On a biologic, n(%)	435 (40%)	550 (32%)	2570 (27%)	

Abstract AB0255 – Table 2. Comparisons of values for disease outcomes of the three age groups

Tender joint count(TJC), mean	1.65	2.17	1.97	$p<0.01$
Tender joint count(28 joints, TJC28), mean	1.17	1.48	1.44	$p=0.01$
Swollen joint count(SJC), mean	1.35	1.49	1.52	$p=0.23$
Swollen joint count(28 joints, SJC28), mean	1.05	1.19	1.20	$p=0.12$
ESR, mean, (mm/h)	17.3	18.8	29.7	$p<0.01$
CRP, mean, (mg/dl)	0.32	0.37	0.58	$p<0.01$
DAS28, mean	2.51	2.78	3.12	$p<0.01$
HAQDI score, mean	0.25	0.42	0.77	$p<0.01$
Proportion in Boolean remission, n(%)	351 (32%)	485 (28%)	2145 (22%)	$p=0.02$

Conclusions: This study shows that TJC may increase during menopause, unlike other disease activity indicators. Especially in group 2, it is possible that the joints which can't be evaluated at TJC 28 are affecting the results because in TJC, compared with TJC 28, there is a larger group difference. Although further studies are needed, an increase in TJC may reflect menopausal joint symptoms.

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AB0256

DIFFERENTIAL DIAGNOSIS OF SERONEGATIVE RA: CALCIUM PYROPHOSPHATE DIHYDRATE DEPOSITION DISEASE

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Background: Calcium pyrophosphate deposition (CPPD) disease is caused by calcium pyrophosphate (CPP) crystals and seen mainly in elderly. Clinical presentation can be heterogeneous. The arthropathy of CPPD may mimic RA, particularly if involving common joints seen in RA. Diagnosis of CPPD arthritis is based on CPP crystals seen in synovial fluid (SF) analysis, chondrocalcinosis (CC) seen in radiographs and/or on typical clinical presentation for CPPD. Early diagnosis of CPPD can be challenging and a proportion of CPPD patients may be misdiagnosed. We demonstrate 17 cases with CPPD initially diagnosed and treated as seronegative RA.

Objectives: To increase awareness that CPPD disease may resemble seronegative RA and to characterise clinical and radiographic phenotypes of these CPPD patients.

Methods: Altogether 435 early seronegative early RA patients were clinically diagnosed in a single rheumatology centre and scheduled for 10 year follow-up. All clinical data and radiographs were collected and reviewed. Patients were re-diagnosed as CPPD related arthritis if they had typical radiographic findings and suitable clinical pattern of CPPD or positive CPP crystal finding in SF. These patients are the subjects of this study.

Results: 17 patients were identified with a CPPD disease. The mean age at baseline was 71.2 years, and 82% were women. In 7 (41.2%) patients baseline symptoms were polyarticular, and in all these patients' wrist, MCP or PIP joints were affected; other symptomatic joints were hip (1 patient) and ankle (3 patients). The initial symptoms of 6 (35.3%) patients were oligoarticular, including MCP and PIP joint involvement (2 patients) or wrist and MCP, PIP or MTP joint symptoms (4 patients). Four (23.5%) patients were diagnosed as monoarthritis including ankle (1 patient) and wrist (3 patients). Seven patients (41.2%) fulfilled 1987 ACR criteria for RA and the diagnosis of early RA of the other 10 patients (58.8%) was based on clinical judgement. During the follow up period the SF analysis of 4 patients was available, 3 SFs showing positivity for CPP crystals. In 13 patients, SF had not been taken. In retrospect the baseline radiographs of 10 patients showed evidence of CC, either in wrists or knees. During follow up all patients developed typical clinical pattern for CPPD disease: chronic CPP crystal inflammatory arthritis (9 patients), acute CPP crystal arthritis (6 patients) and OA with CPPD (2 patients). All developed similar radiographic findings compatible with CPPD, including CC of triangular fibrocartilage (17 patients), CC of knee (9 patients), CC or narrowing of MCP joints (7 patients), CC of metatarsophalangeal (MTP) joints (4 patients), CC of symphysis pubis (1 patient), CC of glenohumeral joint (1 patient) and SLAC (5 patients). None of these patients developed typical RA-like erosions.

Conclusions: The prevalence of CPPD patients in our early seronegative RA patients was 3.9%. CPPD disease can mimic seronegative RA at baseline and is important in the differential diagnosis of seronegative arthritis.

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AB0257

PHYSICAL ACTIVITY IN EARLY AND LONG-STANDING RA – RELATIONS TO DISEASE ACTIVITY, CARDIOVASCULAR RISK FACTORS AND ATHEROSCLEROSIS

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Background: The excess risk for cardiovascular disease (CVD) in Rheumatoid Arthritis (RA), is partly attributable to traditional cardiovascular risk factors for CVD¹ and systemic inflammation,^{1, 2} factors known to be modified by physical activity.^{3, 4}

Objectives: The aim of this cross-sectional study was to objectively measure and compare the level of physical activity in patients with early and long-standing RA, and to analyse possible associations with disease activity, risk factors for CVD and measures of subclinical atherosclerosis.

Methods: This study included 84 patients with early and 37 with long-standing RA (disease duration, mean [SD] 1.4 [0.4] and 16.3 [2.3] years respectively). Physical activity was measured using a combined accelerometer and heart rate monitor and included total physical activity (counts/min), proportion of moderate to vigorous physical activity (MVPA) and sedentary time. Further assessments were; disease activity (ESR, DAS28), functional ability (HAQ), risk factors for CVD (blood lipids, i.e., triglycerides, high density lipoprotein [HDL], low density protein [LDL], blood glucose, blood pressure, waist circumference, body mass index [BMI]), body fat (Dual-energy X-ray), and early signs of atherosclerosis (pulse wave velocity [PWV], augmentation index [AIx] and carotid intima-media thickness [cIMT]).

Results: Physical activity variables did not differ between patients with early and long-standing RA. Thirty-seven% of the patients with early and 43% of the patients with long-standing RA did not reach WHO's recommended levels of MVPA. Univariate linear regression analyses with the two groups combined, showed associations between total physical activity and younger age, lower values for HAQ and disease activity (ESR), as well as more beneficial values