treatments was positively associated with DAS28 remission (OR 1.11 per year increase, 95% C.I. 1.03–1.18, p=0.003).
**Conclusions:** The duration of biologic treatment and the number of previous biologic switches were not associated with of DAS28 remission. Indeed, a longer survival of biologic treatments was associated with remission. The mean survival of biologic treatments reflects both a smaller number of biologic failures and a prolonged response to each biologic treatment.
**Disclosure of Interest:** None declared
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## AB0216 EFFECTS OF ANTI-CITRULLINATED PROTEIN ANTIBODIES ON SYSTEMIC BONE MASS IN RHEUMATOID ARTHRITIS PATIENTS

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**Background:** Bone loss in rheumatoid arthritis (RA) is a key feature both local and systemic. Anti-citrullinated protein antibodies (ACPA) have recently been found to directly induce differentiation and activation of osteoclasts and therefore contribute to periarticular bone loss.
**Objectives:** The aim of this study was to analyze the effect of ACPA on systemic bone mineral density (BMD) in patients with established RA.
**Methods:** This is a cross-sectional study with a single-center RA population. BMD was measured with Dual X-ray absorptiometry at lumbar and femoral sites. ACPA were measured by EIA. Multivariate analysis was performed adjusting for the main confounding variables.
**Results:** One hundred twenty-seven RA patients were enrolled. In univariate analysis ACPA-positive patients showed lower BMD Z-score (SD below the age- and gendermatched mean reference value) at femoral sites ($p<0.01$). A negative correlation between ACPA titer and BMD Z-score at all sites was observed ($p<0.01$). The multivariate analysis adjusted for the main confounding variables confirmed the negative effect of ACPA at femoral sites ($p<0.05$), but not at lumbar spine BMD. No significant effect of rheumatoid factor has been observed.
**Conclusions:** ACPA have a negative titer-dependent effect on BMD at femoral sites, mainly constituted by cortical bone. ACPA-positive patients, especially if at high titer, should undergo bone investigations and be treated with bone protecting agents. Disease-modifying anti-rheumatic drugs lowering ACPA titer might have positive effects on systemic bone mass.
**Disclosure of Interest:** None declared
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## AB0217 THE PROGNOSTIC VALUE OF IGA AUTOANTIBODIES (RHEUMATOID FACTOR AND ACPA) FOR PREDICTION OF THERAPEUTIC RESPONSES TO ANTI-TNF THERAPY IN PATIENTS WITH RHEUMATOID ARTHRITIS

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**Background:** Anti-citrullinated protein antibodies (ACPA) and rheumatoid factor (RF) are important diagnostic markers in rheumatoid arthritis (RA). These antibodies are predominantly of the IgM (RF) or IgG (ACPA) isotype. The added diagnostic and prognostic value of IgA autoantibodies is being debated.
**Objectives:** To determine the prevalence of IgA-RF and IgA-ACPA in patients with RA and to investigate their potential predictive value regarding response to treatment with methotrexate (MTX) and TNF inhibitors.
**Methods:** A total of 255 patients were tested for the presence of IgA-RF, IgA-ACPA and IgG-ACPA by EliA® (Thermo Fisher Scientific); IgM-RF was measured by nephelometry. Therapeutic responses to MTX and TNF blocking biologicals were calculated in an inception cohort (n=104) who had started their DMARD therapy at our clinic. To define therapeutic responses simplified disease activity index (SDAI) 50 and American College of Rheumatology (ACR) 20 responses were calculated.
**Results:** Among the 255 patients tested 125 (49%) had at least one type of IgA autoantibody: 114 (44.7%) were found to be IgA-RF positive and of these 10.5% were negative for IgM-RF and 5.2% were double negative for both IgM-RF and IgG-ACPA; thus, in these patients IgA-RF was the only detectable antibody. IgA-ACPA were detected in 79 (31%) patients and apart from one exception all of them had also IgG-ACPA. Remarkably, the percentage of patients showing a SDAI50 response to TNF inhibitors was significantly lower in patients positive for IgA-RF and/or IgA-ACPA ($p<0.0001$) compared to IgA negative patients. Thus, 58% of IgA negative (but IgM-RF and/or IgG ACPA positive) patients showed a SDAI50 response whereas only 25% of the IgA-RF and/or IgA-ACPA positive ones were responders. Interestingly, while the presence of both IgA specificities did not further change the percentage of responders, patients positive for IgA-ACPA but negative for IgA-RF showed the lowest response rate to anti-TNF treatment. Completely seronegative patients also showed a significantly lower SDAI50 response ($p<0.0001$) to TNF inhibitors compared with the IgA negative (but IgM-RF and/or IgG-ACPA positive) patients. Similar results were obtained when ACR20 was used as response criteria. No differences between the various serological groups were seen with respect to treatment with MTX.
**Conclusions:** While the added diagnostic value of IgA antibody measurement was moderate, IgA-RF and particularly IgA-ACPA appear to be associated with poorer therapeutic responses to TNF inhibitory biological drugs and therefore may help in further stratification of RA patients and therapeutic decision making.
**Disclosure of Interest:** None declared
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## AB0218 CORRELATION OF GRAY SCALE AND POWER DOPPLER ULTRASONOGRAPHY WITH CLINICAL EVALUATION IN RHEUMATOID ARTHRITIS

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**Objectives:** Ultrasonography (US) is a useful method for assessing synovial vascularization and proliferation in rheumatoid arthritis (RA). The aim of the study is to compare the tender joint and swollen joint in patients with rheumatoid arthritis (RA) with gray scale (GS) and power doppler (PD) ultrasonography (US).
**Methods:** Thirty RA patients were included. Median disease duration was 53.7 months. Demographic and clinical data, C reactive protein (CRP) level and erythrocyte sedimentation rate (ESR) were recorded for each patient. Disease activity was evaluated using the Disease Activity Score in 28-joints (DAS28) with a median score 3.8.The joint tenderness and swelling were assessed for 10 joints (wrists, second and third proximal interphalangeal and metacarpophalangeal) in each patient.These joints were evaluated by GS and PD by ultrasonography. US joint effusion, synovitis and PD signals were graded from 1 to 3 for each joints. The 10-joint GS and 10-joint PD scores were then calculated. Correlations were tested using the Spearman coefficient.
**Results:** GS effusion, synovitis scores ($r=0.565$, $p<0.001$) and PD signals ($r=0.883$, $p<0.001$) correlated highly with the corresponding swollen joints. There was a significant correlation between DAS28 and number of tender joints ($r=0.745$, $p<0.001$) but no correlation was found between the tender joints and ultrasonographycal effusion, synovitis grade ($r=0.073$, $p>0.001$) and the PD signal ($r=0.069$, $p>0.001$). There was moderate correlation between 10 joints GS, 10 joints PD and DAS28, but it was not statistically significant.

Table 1. Demographic and clinical characteristics of the patients (n=30)

| | |
|---|---|
| Age (years) – mean (SD) | 53.7±11.9 |
| Female, n (%) | 28 (93.3) |
| RA duration (months) | 42 (67) |
| Rheumatoid factor positive, n (%) | 15 (50) |
| CCP positive, n (%) | 20 (66.7) |
| Smoking, n (%) | 5 (16) |
| Prednisone, n (%) | 11 (36.7) |
| DAS28 (ESR), (IQR) | 3.8 (2.9) |
| TJC (0–10), (IQR) | 2 (5) |
| SJC (0–10), (IQR) | 0 (0) |
| 10 Joint GS score, (IQR) | 0 (1) |
| 10 Joint PD score, (IQR) | 0 (0) |
| ESH mm/h (IQR) | 23.5 (21) |
| CRP mg/L (IQR) | 4.6 (6.5) |

SD: standard deviation, RA: rheumatoid arthritis, CCP: cyclic citrullinated peptide, DAS28: disease activity score in 28 joints, ESR: erythrocyte sedimentation rate, CRP: C-reactive protein, GS: gray scale, PD: power doppler, TJC: tender joint count, SJC: swollen joint count.

**Conclusions:** Evaluating the swollen joints with clinical examination and combining it with US is a sensitive method. As joint tenderness is a more subjective finding than the joint swelling, this may explain the lack of correlation between tender joints and ultrasonography findings. We suggest to use Gray scale US and PD as a complementary method in addition to clinical assessment of joint tenderness in patients with RA.
**Disclosure of Interest:** None declared
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## AB0219 INTENSIVE COMBINATION THERAPY WITH MEDICATION AND ORTHOPEDIC SURGICAL INTERVENTION FOR TREATING RHEUMATOID ARTHRITIS PATIENTS WITH DETERIORATED JOINTS

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**Background:** The treatment aim of rheumatoid arthritis (RA) is achieving and maintaining remission (REM) or low disease activity (LDA) via tight medical control. However, despite remarkable advances in medication, progressive deterioration and/or deformity of the joint sometimes occurs, if adequate medication is not administered in the early stage. Surgical reconstruction is still required in the joints with functional loss caused by structural damage. Recently, patients have expressed a desire to achieve functional REM with a higher quality of life (QOL) and improved mental wellness.
**Objectives:** The objective of this study was to clarify the effectiveness of intensive combination therapy with medication and orthopedic surgical intervention in patients who have already achieved REM or LDA.