smokers, 61% with AH, 34% with dyslipidemia). Median duration of RA was 8 years (IQR 3–17). Seropositive RA was diagnosed in 69% of patients. Median CRP was 12.1 mg/dl (IQR 2.2–23.4 mg/dl), median rheumatoid factor (RF) was 32.5 IU/ml (IQR 8.3–173 IU/ml). All patients received disease-modifying antirheumatic drugs, 22 (38%) - biological treatment. Median duration of AH was 6.1 years (IQR 0–10 years). All patients with AH received antihypertensive treatment. 24-h peripheral and central BP monitoring was performed (BPLab Vasotens, “Petr Telegin”). Arterial stiffness was assessed by applanation tonometry (Sphygmocor, AtCor, Australia). $P < 0.05$ was considered significant.

Results: Mean office BP was $130 \pm 15/80 \pm 10$ mmHg. Mean pulse wave velocity (PWV) was 9.3 ± 3.2 m/s. The dipping states were as follows: non-dipping in 39 (62.9%) patients, dipping – In 7 (11.3%), extreme dipping – in 5 (8.1%) and reverse dipping in 11 (17.7%). Median of nocturnal fall in systolic BP was 3.5% (IQR 0–9%). Isolated nocturnal AH was observed in 12 (19.4%) pts. Patients were divided into 2 groups according to nocturnal fall of BP: G1 (non-dipping – $> 10\%$) – 42 (67.7%) pts and G2 (dipping – $< 10\%$) – 16 (32.3%) pts. Non-dippers were older (56.7 ± 16.2 vs 49 ± 12.5 years), more often were smokers (20 vs 0%), had higher BMI (25.4 ± 6.0 vs 22.3 ± 5.1 kg/m²), median duration of AH (1.5; IQR 0–11 vs 0; min 0, max 1 years), median duration of RA (10; IQR 7–19 vs 2.5; IQR 2–6.5 years), PWV (8.6 ± 2.8 vs 7.2 ± 1.1 m/s), nocturnal BP ($120.4 \pm 12.7/69.8 \pm 10.4$ vs $103.8 \pm 8.8/59.4 \pm 4.4$ mmHg), $p < 0.05$ for trend. Spearman analysis revealed significant correlations between nocturnal fall in SBP and RA duration ($r = -0.3$), central BP ($r = 0.2$ for SBP and DBP), night SBP and DBP ($r = -0.3$ and -0.5 respectively), $p < 0.05$ for trend. Multiple regression analysis showed that elevation of central office DBP and night DBP were significant predictors of non-dipping state ($\beta = -3.7$, $p = 0.008$ and -0.7 , $p < 0.0001$ respectively).

Conclusions: The majority of patients with rheumatoid arthritis are characterized by non-dipping state. Diastolic nocturnal hypertension is a significant predictor of non-dipping in this patient population.

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SAT0104 THE IMPACT OF DISEASE ACTIVITY ON PATIENT REPORTED COGNITIVE DYSFUNCTION (“BRAIN FOG”) IN RHEUMATOID ARTHRITIS

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Background: Rheumatoid arthritis (RA) is a systemic, inflammatory disease and its burden extends beyond joint disease. In recent years, there has been significant advances in treating joint disease but we need a greater understanding of physical and especially psychosocial comorbidities to improve quality of life in RA patients. In particular, patients often report “brain fog” meaning a diminished ability to think, learn, remember and perform other mental tasks. Doctors have long recognized that patients with certain physical conditions can experience cognitive dysfunction. Limited information is available in the literature with regard to the prevalence of cognitive dysfunction and factors associated with the condition in RA.

Objectives: To characterize the association of disease activity with patient reported cognitive dysfunction in patients with RA overall and stratified by age.

Methods: We identified patients with RA aged ≥ 18 years who were enrolled in the Corrona registry who were biologic naïve at their last follow-up visit (October 2010–June 2016). We compared those who reported cognitive dysfunction (responded “yes” to the question asking if they had “problems with thinking”) to those who did not with respect to disease activity based on the Clinical Disease Activity Index (CDAI). Unadjusted and adjusted logistic regression models controlling for demographic (age, gender, race, education), comorbidity/lifestyle (diabetes, fibromyalgia, body mass index, smoking) and RA disease characteristics (disease duration, disability and prednisone dose) were conducted. We further examined whether the relationship between disease activity and cognitive dysfunction varied based on patients age (< 55 vs. > 55 years) testing the moderating effect using a likelihood ratio test.

Results: There were 10,401 patients who met inclusion criteria of whom 863 (8%) reported cognitive dysfunction. Those who reported cognitive dysfunction were more likely to be women (83% vs. 73%, $p < 0.001$), younger (62 vs. 64 years, $p < 0.001$), disabled (24% vs. 8%, $p < 0.001$), with moderate/high disease activity based on the CDAI (51% vs. 31%, $p < 0.001$). In adjusted models, the likelihood of cognitive dysfunction increased with higher levels of disease activity in the total population (Table). The impact was more pronounced in those age < 55 ($p = 0.007$; Table).

	Total population*	Age < 55 **	Age ≥ 55 **
Disease activity OR (95% CI)*			
Remission	1	1	1
Low	2.70 (2.11–3.45)	3.97 (2.34–6.75)	2.42 (1.84–3.20)
Moderate	3.56 (2.75–4.61)	5.93 (3.45–10.19)	3.01 (2.24–4.05)
High	3.90 (2.92–5.21)	7.92 (4.49–13.98)	2.90 (2.04–4.12)

*Adjusted for age, gender, race, disability, education, smoking status, body mass index, diabetes, fibromyalgia, disease duration and prednisone dose. **Adjusted for gender, race, disability, education, smoking status, body mass index, diabetes, fibromyalgia, disease duration and prednisone dose.

Conclusions: Increasing disease activity is associated with a higher likelihood of reporting cognitive dysfunction. The effect was more pronounced in younger as opposed to older RA patients.

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SAT0105 SURVIVAL IN FIRST LINE OF BIOLOGIC AGENTS IN AN APULIAN COHORT OF RHEUMATOID ARTHRITIS PATIENTS WITH OCCULT HEPATITIS B VIRUS INFECTION

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Background: The occurrence of hepatitis B virus (HBV) infection may be a concern during the treatment of patients with Rheumatoid Arthritis (RA). We wondered whether a state of HBV occult infection (anti-HBcAg-pos, HBsAg-neg, HBV-DNA-neg) might influence the effectiveness of biological drugs in RA patients in real-world settings.

Objectives: We performed a retrospective analysis to evaluate the survival on first line biologic drug of RA Apulian patients with HBV occult infection.

Methods: We analyzed longitudinal data of 384 consecutive RA patients starting a first biological drug in a time frame from 1st January 2008 to 31st December 2014. Demographic and disease related characteristics were collected at baseline and at last observation visit. Baseline serological markers of HBV infection and causes of discontinuation of treatment were also recorded. Primary endpoint was the influence of anti-HBcAg-pos on drug survival, estimated by Kaplan-Meier life table analysis. Estimates hazard ratios (HRs) of drug discontinuation or achievement of Clinical Disease Activity Index (CDAI) based remission at last visit, adjusted for disease characteristics, biological drug class and anti-HBcAg-pos were computed by Cox-regression models.

Results: No baseline demographic and disease characteristics difference between anti-HBcAg-pos and anti-HBcAg-neg RA patients were detected, except for DAS28 that was significantly higher in anti-HBcAg-pos group. Drug survival rate was significantly lower in anti-HBcAg-pos (57.6%, median survival time (95% CI) 54 months (38–69)) than in anti-HBcAg-neg patients (67.8%, median survival time (95% CI) 77 months (59–94)). Median survival time for ineffectiveness was 15 months (12–17) for anti-HBcAg-pos and 24 months (18–30) for anti-HBcAg-neg patients ($p = 0.04$). Cox regression models showed a significant association between anti-HBcAg-neg (HR 0.60, 0.39–0.92) or RF/ACPA-neg (HR 1.69, 1.16–2.46) and drug discontinuation, while co-therapy with MTX (HR 2.14, 1.01–4.58) or with steroids (HR 0.38, 0.16–0.91), and RF/ACPA-neg (HR 0.45, 0.21–0.95) were independently associated with the achievement of CDAI based remission.

Conclusions: HBV occult infection seems to influence negatively the effectiveness

of biological therapies in RA patients. However, being a real-life setting, unknown confounding factors might generate an apparent association or mask a true correlation between the HbA1c status and clinical outcomes.

Disclosure of Interest: None declared

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SAT0106 FURTHER "WELLNESS" CAN BE ACHIEVED BY SURGICAL INTERVENTION IN THE IMPAIRED HAND EVEN FOR PATIENTS WITH WELL-CONTROLLED RHEUMATOID ARTHRITIS

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Background: The hand is the most frequently involved site in rheumatoid arthritis (RA). The treatment aim of 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 hand, if adequate medication is not administered in the early stage. Surgical reconstruction is still required in hands with functional loss and/or a grotesque appearance caused by joint deterioration or tendon rupture. 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 systemic effects of surgical intervention in the impaired hand, even in patients with well-controlled disease who have achieved REM or LDA.

Methods: A prospective cohort study was performed in 119 hands of 119 patients with functional loss and/or a grotesque appearance due to RA who underwent primary elective surgery between October 2012 and September 2014. A total of 42 hands in 42 patients (males: 2, females: 40) had a disease activity of REM or LDA just before surgery. In the REM/LDA group, the average (range) age was 61 (29–82) years, and the average (range) disease duration was 15 (2–35) years. The procedures performed included Darrach procedure (ulnar head resection) in 17 hands, radiolunate arthrodesis in 10, extensor tendon reconstruction in 6, thumb/finger metacarpophalangeal joint arthroplasty (Swanson) in 14, proximal interphalangeal (interphalangeal) joint fusion in 4, and thumb CM joint arthroplasty (Thompson) in 4 and so on. The patient-reported outcome (PRO) was assessed using the Health Assessment Questionnaire-Disability Index (HAQ-DI), EuroQol-5 Dimensions (EQ-5D), Beck Depression Inventory-II (BDI-II), Patient's General Health using visual analogue scale of 100 mm (Pt-GH), and the Disabilities of the Arm, Shoulder and Hand (DASH). The 28-joint Disease Activity Score using C reactive protein (DAS28-CRP) and Grip power (GP) were also examined. All of these items were investigated just before surgery (baseline) and again at 6 and 12 months after surgery.

Results: On the whole, the physical function (HAQ-DI, DASH, GP), QOL (HAQ-DI, EQ-5D, Pt-GH), mental wellness (BDI-II, Pt-GH), and disease activity (DAS28-CRP) were significantly improved at 6 and 12 months after surgery compared to baseline ($p < 0.05$)¹⁾. In the REM/LDA group, a significant improvement was noted in the upper-extremity function (DASH), QOL (EQ-5D), and disease activity (DAS28-CRP) at 6 and 12 months after surgery; however, we did not observe any significant changes in any other items (Table1).

Table 1: Outcome of surgical intervention in the impaired hand for patients with rheumatoid arthritis

		HAQ-DI	EQ-5D	BDI-II	Pt-GH (mm)	DASH	GP (mmHg)	DAS28-CRP
Total n=119	baseline	1.07 (0.73)	0.72 (0.12)	13.4 (9.4)	35 (23)	42.1 (22.5)	126 (58)	3.1 (0.9)
	PO# 6mos.	0.97* (0.78)	0.76** (0.14)	11.7** (8.6)	24** (21)	36.7** (21.7)	135* (55)	2.4** (2.1)
	PO# 12mos	0.91** (0.78)	0.76** (0.14)	11.9** (9.1)	24** (20)	35.7** (23.0)	139** (60)	2.2** (0.8)
REM+LDA n=42	baseline	0.85 (0.63)	0.75 (0.14)	11.0 (8.1)	15 (13)	34.6 (21.8)	143 (61)	2.1 (0.5)
	PO# 6mos.	0.80 (0.68)	0.80** (0.15)	10.1 (8.1)	16 (18)	30.2** (19.6)	143 (57)	1.8** (0.6)
	PO# 12mos	0.81 (0.760)	0.79** (0.16)	10.8 (8.3)	14 (14)	30.1** (21.0)	151 (66)	1.8** (0.7)

Mean(SD) *: $p < 0.05$ compared to baseline, **: $p < 0.01$ compared to baseline

Conclusions: Achieving REM or LDA is not the ultimate goal of treatment for patients with functional loss and/or a grotesque appearance of their hands. Further "wellness" can be achieved by surgical intervention in the affected hand, even for patients with well-controlled RA. Such intervention can also ameliorate the disease activity.

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SAT0107 FACTORS THAT INFLUENCE ON PAIN CONTROL DURING TREATMENT FOR RHEUMATOID ARTHRITIS PATIENT

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Background: Pain control is the most important theme for treatment of rheumatoid arthritis (RA) patient. For pain control, it is obviously important key to control disease activity control. However, patient status at start of treatment (BL), can be also important as well as disease activity control. Including these factors, keys that can reduce pain should be clarified.

Objectives: In this study, factors that affect on pain control were evaluated statistically from real clinical data.

Methods: In 685 RA patients who have been treated for more than 1 year, 500 patients were monitored their disease activity with parameters in 28-joints disease activity index with C-reactive protein (DAS28-CRP), pain score using visual analogue scale (PS-VAS), modified Health Assessment Questionnaire Disability Index (mHAQ). Drugs administered for patient had been checked at the time of consult.

PS-VAS at consult was evaluated, as it demonstrated no more than 15mm, or decrease than last time more than 20mm was evaluated as "Pain Reduced". Patients sex, ACP, Sharp/van der Heijde Score (SHS), patients current age, history length, DAS28-CRP and its components, PS-VAS at BL, and followed consultation, drug usage and its dosage were evaluated for Pain Reduced statistically with Binary Logistic Regression Analysis. Significant level was set within 1%.

Results: 14,005 times from 495 patients were enrolled in this study. At BL, male patient, higher ACPA, younger age at onset and at BL, older age at following consultation, short following term, smaller SvdHS, greater tenderness joint count (TJC), swollen joint count (SJC), smaller patient's global assessment (PGA), evaluator's global assessment (EGA), great CRP, and smaller mHAQ and DAS28-CRP at BL demonstrated significant contribution on Pain Reduce. In following consult, smaller mHAQ, PS-VAS, and DAS28-CRP, in which smaller PGA and EGA, demonstrated significant contribution on Pain Reduce. In drugs, paracetamol/tramadol combination drug use, non-steroid anti-inflammation drug (NSAIDs) use, pregabalin use, tofacitinib use, and opioid use, and methotrexate dose decrease demonstrated significant contribution on Pain Reduce.

Conclusions: These results suggest that pain control for RA patient depends on patient's status at baseline. And followed disease activity control and activity in daily life (ADL) maintenance. In adding with these, drug selection is also important key. It is also suggested specific drugs have higher effect on pain control. Anti-chronic pain agent can be candidate for pain relief for the patient who complains remnant pain even after successful disease activity control and ADL maintenance.

Disclosure of Interest: None declared

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SAT0108 CLINICAL SIGNIFICANCE OF ANTI-ACTIN ANTIBODIES IN AUTOIMMUNE INFLAMMATORY RHEUMATIC DISEASES

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Background: Anti-actin antibodies (AAA) are well-described as the major component of smooth muscle autoantibodies (microfilament antibodies). They are specially detected in patients with chronic active hepatitis (CAH) and celiac disease (CD). AAA have also been found less frequently in various other autoimmune disorders including systemic lupus erythematosus (SLE), Sjogren's syndrome, and myasthenia gravis, as well as in primary biliary cirrhosis and alcoholic liver disease.

Objectives: to study clinicobiological characteristics of patients with AAA in autoimmune inflammatory rheumatic diseases (AIRD).

Methods: From January to December 2016, we have collected all cases of patients with AAA presenting for symptomatology of AIRD. The presence of AAA was detected fortuitously by indirect immunofluorescence (IIF) in accordance with its characteristic fluorescence pattern in HEp2 cells (BioRad®). The specificity for F-actin was confirmed by IIF on rat liver-kidney-stomach sections (Biosystem®) and/or Immunodot (Euroimmun®). Coeliac disease related antibodies were performed in all patients with AAA.

Results: Six patients were included: 5 women and a man with a mean age of 43.5 years. AIRD have been suspected in these patients and the mean clinical features were inflammatory polyarthralgia and fever. AIRD was diagnosed in three cases: One patient presented with SLE and two others with rheumatoid arthritis (RA). Hepatic function was disturbed with elevated serum ALT and AST activities in one case highly suspected of CAH. CD was diagnosed in one case. The sixth patient had positive antinuclear antibodies, hypocomplementemia and anti-Ro52, anti-SSB and anti-DFS antibodies associated with FR but didn't