Abstract OP0051 – Table 1

	Baseline	Month 6	Month 12	Month 18	Month 24
Clinical improvement n, (%)					
Complete		28/35 (80)	24/27 (88.9)	21/22 (95.4)	17/18 (94.4)
Partial		5/35 (14.3)	3/27 (11.1)	1/22 (4.5)	1/18 (5.5)
No improvement		2/35 (5.7)	0 (0)	0 (0)	0 (0)
Laboratory markers, median [IQR] #					
ESR	41.5 [16.7-58.5] (36)	4 [2-8] (35) *	4.5 [2-12] (28) *	5 [2.5-11] (23) *	4 [2-12.5] (19) *
CRP	2.4 [0.9-6.6] (36)	0.1 [0.0-0.7] (33) *	0.3 [0.1-0.6] (27) *	0.1 [0.1-0.5] (23) *	0.1 [0.0-0.5] (18) *
Dose of corticosteroids (mg/day), median [IQR] #	12.5 [8.4-26.2] (36)	5.0 [1.2-5.0] (33) *	0.0 [0.0-4.2] (28) *	0.0 [0.0-2.5] (21) *	0.0 [0.0-0.0] (19) *
Improvement in PET/CT					
Complete		0/8 (0)	3/13 (23)	3/11 (27.3)	1/4 (25)
Partial		6/8 (75)	6/13 (46.1)	7/11 (63.6)	2/4 (50)
No improvement		2/8 (25)	4/13 (30.8)	1/11 (9.1)	1/4 (25)

*p<0.0001 (Wilcoxon test)

Conclusions: Although TCZ seems to be an important therapeutic agent in the treatment of GCA, achieving a rapid and sustained clinical and analytical improvement, the decrease in vessel inflammation assessed by F18-fluorodeoxyglucose uptake seems to take a slower course.

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OP0052 MICROPARTICLES AS POTENTIAL BIOMARKERS OF DISEASE ACTIVITY IN ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODY – ASSOCIATED VASCULITIS

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Background: Microparticles (MPs) are submicron particles, which are released from plasma membrane upon cell activation and during the early phase of apoptosis. Increased levels of circulating MPs, mainly of endothelial cell origin, but also platelet derived, have been shown to correlate with autoinflammatory disease activity, such as anti-neutrophil cytoplasm antibody (ANCA) – associated vasculitis (AAV).

Objectives: The aim was to evaluate levels of activity markers expressed on MPs from patients with AAV, during active disease and remission, compared to healthy control subjects.

Methods: Our study included 46 AAV patients and 23 healthy age and gender matched control subjects. We analysed the concentration of MPs in plasma by flow cytometry. MPs were phenotyped by expression: CD142 (tissue factor-TF), anti-H3cit (citrullinated Histone 3 directed against neutrophil extracellular traps – NETs), anti-pentraxin3 (pentraxin3), HMGB1 (high mobility group box 1 protein-HMGB1), anti-TWEAK (tumour necrosis factor-like weak inducer of apoptosis-TWEAK), anti-plasminogen (plasminogen), anti-C3a (C3a) and anti-C5a (C5a). The assessment of vasculitis disease activity was performed using the Birmingham Vasculitis Activity Score (BVAS), where active disease was defined as BVAS ≥ 1 and inactive (remission) as BVAS=0.

Results: Half of the patients group² had active vasculitis (13 male/10 female, mean age 61±14 years) and 23 had inactive disease (12 male/11 female, mean age 64±13 years). Concentration of MPs expressing TF, H3cit, pentraxin-3 and HMGB1 in active patients were significantly higher than in those in remission and healthy controls (p<0.01, p<0.0001, respectively). MPs expressing C5a and C3a were significantly higher in both active and inactive patients compared to controls (p<0.001). Additionally, levels of MPs expressing C5a and C3a strongly correlated with BVAS in patients with active disease (r=0.78, p<0.0001; r=0.5, p<0.01, respectively), while there was no significant correlation between other explored markers and BVAS.

Conclusions: Our results support recently postulated role of the complement system in AAV pathogenesis and disease activity. Evaluated proteins expressed

on MPs, especially C5a and C3a, could be used as potential biomarkers which might reflect inflammation and disease activity in AAV patients. Further investigations are necessary to confirm our preliminary results and to validate the most promising biomarker in AAV.

Disclosure of Interest: None declared

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OP0053 INFLAMMATORY DISORDERS ASSOCIATED WITH TRISOMY 8 MYELODYSPLASTIC SYNDROMES : FRENCH RETROSPECTIVE CASE CONTROL STUDY

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Objectives: We report myelodysplastic syndrome (MDS)-associated systemic inflammatory and autoimmune diseases (IADs) with cytogenetic trisomy 8, and describe their outcome, treatments efficacy and impact on MDS survival in a French multicenter retrospective study.

Methods: In this study, 21 patients with trisomy 8-MDS and IADs were analysed and compared to 103 MDS patients with trisomy 8 without IADs.

Results: The median age was 67 [59 – 80] years and the male/female ratio 0.9. The IADs were Behçet's or Behçet's-like disease in 11 (52%) cases, inflammatory arthritis in 4 (19%) cases, Sjögren's syndrome, autoimmune hemolytic anaemia, aseptic abscesses, polyarteritis nodosa, Sweet's syndrome and unclassified vasculitis in one case each. Trisomy 8 karyotype was isolated in 8 cases (38%) and associated with other abnormalities in remaining cases. Seventeen (81%) IADs patients were treated (88% with steroids) with complete and partial response in 35% and 47%, respectively. A second-line therapy was required for steroid dependence or relapse in 38% of cases. The effect of MDS treatment on IADs could be assessed in 7 patients treated with Azacytidine : 5/13 (38%) achieved remission and 2/13 (15%) partial response of IADs. Compared with 103 trisomy 8-MDS/CMML patients without IADs, IADs patients were more often non-Caucasian (p=0.004), MDS subtype tended to be more frequently CRDM (p=0.09) and had more often a poor karyotype (p<0.001). No survival difference was seen between patients with trisomy 8-MDS-associated IADs and without IADs.

Conclusions: The spectrum of IADs associated to trisomy 8-MDS is dominated by Behçet's disease, but may also be other various immune disorders. Steroid therapy is often effective, but sparing therapies are mostly necessary.

Disclosure of Interest: None declared

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Envisioning new horizons for people with osteoarthritis

OP0054 PAIN IN HAND OSTEOARTHRITIS AND THE ASSOCIATIONS WITH RADIOGRAPHIC OSTEOARTHRITIS SEVERITY AND PSYCHOLOGICAL FACTORS

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Background: Pain is the most preferred area of improvement for patients with hand osteoarthritis (OA). Whereas only weak associations have been found between radiographic OA severity and pain, few studies have explored whether psychological factors are associated with pain.

Objectives: To examine whether radiographic severity, depression, anxiety and pain catastrophizing are associated with self-reported pain in patients with hand OA, and to explore possible interactions between psychological factors and radiographic severity.

Methods: The Nor-Hand study is an observational cohort study of 300 (89% women) hand OA patients with median (IQR) age of 61 [57–66] years. Participants completed questionnaires, including Numeric Rating Scale (NRS, 0–10 scale) about hand pain, Australian/Canadian (AUSCAN) hand pain subscale (0–20 scale), Hospital Depression and Anxiety Scale (HADS, 0–42 scale) and Pain

Catastrophizing Scale (PCS, 0–52 scale) at the baseline examination in 2016–2017. Bilateral interphalangeal, metacarpophalangeal, first carpometacarpal and the scaphotrapezotrapezoidal joint were scored for radiographic OA according to the Kellgren-Lawrence (KL) index (sum score: 0–132 scale). Using linear regression analyses, we analysed whether KL sum score, HADS sum score and PCS sum score (independent variables) were associated with AUSCAN pain (dependent variable). Separate models were applied for each independent variable with adjustment for age, sex and body mass index (BMI). Thereafter, all independent variables were included in the same model. Analyses were repeated using NRS hand pain as the dependent variable. Interactions between KL sum score and HADS/PCS were explored.

Results: Patients reported wide range of pain severity with mean (SD) AUSCAN pain of 8.2 (4.0) and mean (SD) NRS hand pain of 3.8 (2.3). Their radiographic severity ranged from minimal to severe with a median (IQR) KL sum score of 28 (15–44). Most patients reported low levels of anxiety, depression and pain catastrophizing with median (IQR) HADS sum score of 6 (3–10) and PCS sum score of 9 (5–15).

The HADS and PCS sum scores were associated with hand pain, both when analysed separately and in the same model together with KL sum score (table 1). Increasing radiographic severity was not associated with hand pain in the age, sex and BMI-adjusted models. When including HADS and PCS in the models, the associations between radiographic severity and pain became stronger for both pain outcomes and statistically significant for AUSCAN pain (table 1).

We found interactions between KL sum score and HADS. In the 61 persons with HADS depression and anxiety subscale scores below 8, the KL sum score was significantly associated with AUSCAN pain ($B=0.03$, 95% CI: 0.003 to 0.06, $p=0.03$) and NRS pain ($B=0.02$, 95% CI: 0.002 to 0.03, $p=0.03$) (adjusted for age, sex, BMI and PCS), whereas no associations between radiographic severity and pain was found in persons with HAD depression and/or anxiety subscale scores of 8 or more.

Abstract OP0054 – Table 1

	AUSCAN pain (B, 95% CI)		NRS hand pain (B, 95% CI)	
	Model 1*	Model 2**	Model 1*	Model 2**
KL sum score	0.01 (-0.01, 0.04), $p=0.35$	0.03 (0.001, 0.05), $p=0.04$	0.005 (-0.01, 0.02); $p=0.52$	0.01 (-0.002, 0.03); $p=0.09$
HADS sum score	0.19 (0.11, 0.26); $p<0.001$	0.12 (0.04, 0.20); $p=0.01$	0.11 (0.07, 0.15); $p<0.001$	0.08 (0.03, 0.12); $p=0.001$
PCS sum score	0.17 (0.12, 0.23); $p<0.001$	0.14 (0.08, 0.20); $p<0.001$	0.10 (0.07, 0.13); $p<0.001$	0.07 (0.04, 0.11); $p<0.001$

* separate models for KL, HADS and PCS, respectively, with adj. for age, sex and BMI ** KL, HADS and PCS included in the same model with adj. for age, sex and BMI.

Conclusions: Depression, anxiety and pain catastrophizing were associated with pain in hand OA, emphasising that pain in hand OA should be treated in a biopsychosocial framework. Importantly, radiographic severity was associated with pain only in persons with no or low levels of depression and anxiety.

Disclosure of Interest: None declared

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OP0055

A NOVEL METHOD FOR ASSESSING PROXIMAL TIBIOFIBULAR JOINT ON MR IMAGES IN PATIENTS WITH KNEE OSTEOARTHRITIS

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Background: Proximal tibiofibular joint (ProxTibFibJ) is a synovial sliding joint that has been estimated to transmit one-sixth of the leg's static load. One study has reported that proximal fibular osteotomy could significantly improve the clinical outcomes in patients with medial compartment OA. However, no study has delineated the measurement of ProxTibFibJ morphological parameters (ProxTibFibJ contacting area, load-bearing area, lateral stress-bolstering area and posterior stress-bolstering area) on magnetic resonance imaging (MRI) and investigated their correlations with knee OA structural abnormalities.

Objectives: To validate a pragmatic method to measure the morphological parameters of the ProxTibFibJ and to describe their associations with knee structural abnormalities in patients with knee osteoarthritis (OA).

Methods: A total of 408 participants with knee OA were selected. The morphological status of ProxTibFibJ were measured on coronal and sagittal magnetic resonance images (MRI). We calculated the contacting area of ProxTibFibJ (S), and its projection areas onto the horizontal (load-bearing area, St), sagittal (lateral stress-bolstering area, S_l) and coronal plane (posterior stress-bolstering area, S_v), respectively. Knee structural abnormalities including cartilage defects, bone

marrow lesions (BMLs) and cartilage volume were evaluated. Clinical construct validity was examined through describing the associations between the morphological parameters of ProxTibFibJ and knee structural abnormalities. The reliabilities were examined by calculating the intra- and inter-observer correlation coefficients.

Results: The average ProxTibFibJ fibular contacting area was $2.4 \pm 0.7 \text{ cm}^2$. The intra- and inter-observer correlation coefficients for all measures were excellent (all ≥ 0.90). In cross-sectional analyses, the ProxTibFibJ morphological parameters (S, St, S_v and S_l) were significantly associated with radiographic medial JSN (OR 1.72 for S; 2.20 for St; 1.65 for S_v), radiographic medial osteophyte (OR 0.51 for S_l) and MRI-assessed knee joint structural abnormalities including cartilage volume ($\beta -0.07$ for S; -0.09 for St), cartilage defects (OR 1.63 for S; 1.95 for St) and BMLs (OR 1.54 for S; 1.74 for St) at medial tibiofemoral compartment. In longitudinal analyses, S (RR, 1.45) and St (RR, 1.55) of ProxTibFibJ were significantly and positively associated with an increase in medial tibial cartilage defects over 2 years, after adjustment for age, gender, height, weight, ROA, tibial plateau bone area and intervention. St ($\beta, -0.07$), S_v ($\beta, -0.07$) and S ($\beta, -0.06$) of ProxTibFibJ were significantly and negatively associated with change in medial tibial cartilage volume, after adjusted for above covariates. St (RR, 1.55) of ProxTibFibJ was positively associated with an increase in medial tibial BML, and S_l (RR, 0.35) was negatively associated with an increase in medial femoral BMLs.

Conclusions: This novel method to assess the morphological parameters of ProxTibFibJ using MRI is reproducible, and has clinical construct validity. The longitudinal associations with osteoarthritic changes suggest that higher load-bearing area of ProxTibFibJ is a potential risk factor for medial compartment OA.

Disclosure of Interest: None declared

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OP0056

MOLECULAR AND STRUCTURAL BIOMARKERS OF INFLAMMATION AT 2 YEARS AFTER ACUTE ACL INJURY DO NOT PREDICT STRUCTURAL KNEE OSTEOARTHRITIS AT 5 YEARS

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Background: Trauma-induced cytokine response and local inflammation after knee injury may be important in the development of posttraumatic osteoarthritis (OA). It has been reported that synovial fluid levels of inflammatory markers remain increased up to 5 years after anterior cruciate ligament (ACL) injury, indicative of extended local inflammation in the injured joint.¹ Inflammation potentially represents a valid target for treatment in the early and subacute phase after joint trauma in order to prevent or delay onset of post-traumatic knee OA.