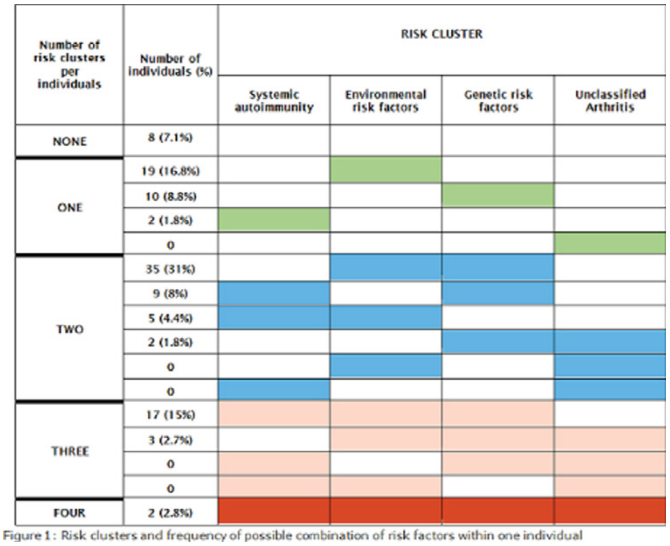

Figure 1: Risk clusters and frequency of possible combination of risk factors within one individual

figure 1. Until now, 43 people were followed for 5 years; additional 52 telephone interviews were conducted. No evidence of RA (clinically or by history) was found.
Conclusions: By now none of the followed individuals had any evidence of inflammatory joint disease based on patient-telephone interviews conducted and completed 5-year follow-up examinations. We were unable to find evidence for practical value of routine AAB screening in healthy individuals without clinical signs of inflammatory joint diseases.
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FRI0689 LIPID PEROXIDATION AS RISK FACTOR FOR ENDOTHELIAL DYSFUNCTION IN ANTIPHOSPHOLIPID SYNDROME (APS) PATIENTS

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Background: APS pathophysiology is not clear enough yet since it has been implicated that aPL can activate cells (endothelial cells, monocytes, platelets), interfere with hemostatic reactions and activate complement reactions [1,2].
Objectives: The aim of this study was to evaluate oxidative stress markers and it relations to endothelial damage as risk factor for thrombosis in patients with primary (PAPS) and secondary (SAPS) antiphospholipid syndrome (APS) in correlation to traditional risk factors.
Methods: Flow mediated (FMD) and nitroglycerine (NMD) induced dilation of the brachial artery were studied in 140 APS patients (90 PAPS, 50 SAPS) and 40 controls matched by age, sex and conventional risk factors for atherosclerosis. Markers of oxidative stress: lipid hydroperoxydes (LOOH), advanced oxidation protein products (AOPP), total sulfhydryl grups (tSHG) and paraoxonase 1 activity (PON1) were determined by spectrophotometric method.
Results: Oxidative stress dominate in APS patients. LOOH and AOPP correlate to lipid fractions ($p<0.05$), unlike PON1, tSHG that correlated to antiphospholipid antibody positivity ($p<0.05$). FMD was lower in APS patients comparing to controls ($p<0.001$). Cholesterol is independent variable for FMD impairment in control group (p=0.011); LOOH in PAPS (p=0.004); LOOH, aCL and triglycerides in SAPS patients (p=0.009, p=0.049 and p=0.012, respectively).Combined predictive of aCL and LOOH is better for FMD impairment than LOOH alone in both PAPS and SAPS patients (AUC 0.727, p=0.001, 95% CI 0.616–0.837 and AUC 0.824, $p<0.001$, 95% CI 0.690–0.957, repectively).
Conclusions: Endothelial dysfunction is doubtlessly present in APS patients with oxidative imbalance as additional risk factor among other risk factors for clinical event. Anticardiolipin antibodies affect endothelial dependent vasodilatation in SAPS patients. We demonstrated synergistic effect of aCL and LOOH as risk for endothelial impairment in both PAPS and SAPS patients.
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FRI0690 RISK OF FRACTURE AMONG PATIENTS WITH GOUT: A POPULATION-BASED COHORT STUDY

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Background: Gout is the most common type of inflammatory arthritis, affecting 2.4% of adults in the UK and is associated with a number of co-morbidities. Our understanding of the association between gout and fracture risk is limited with previous studies offering conflicting results.
Objectives: To determine the risk of fracture among gout patients and assess the potential impact of urate-lowering therapy (ULT) on fracture risk.
Methods: Utilising primary care records from Clinical Practice Research Datalink we identified patients with gout between 1990 and 2004 who were followed up until 2015. Each gout patient was individually matched to 5 individuals without gout based on age, sex, and registered practice. Absolute rate (AR) of fracture and hazard ratios (HR) were calculated using Cox regression models. We further stratified our analysis by age, gender and ULT prescription.
Results: We matched 35,857 patients with incident gout to 148,407 controls. Overall, we found no increased risk of fracture among gout patients compared to controls. However, men with no evidence of ULT had higher absolute risk of fracture compared to controls (AR=39 versus 26 per 10,000 person-years) corresponding to a 23% (HR=1.23; 95% CI 1.12–1.36) increased risk. The risk was particularly high for vertebral (HR=1.50; 95% CI 1.20–1.87) and wrist fracture (HR=1.45; 95% CI 1.21–1.74). Those treated with ULT had a 12% (HR=0.88; 95% CI 0.79–0.98) lower risk of fracture. Similar findings were not observed for women.
Conclusions: We found higher risk of vertebral and wrist fractures among men with gout not prescribed ULT. Those prescribed ULT had lower risk of fracture compared to the general population. Further research is needed to understand the role of ULT in fracture prevention.
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FRI0691 ASSOCIATION BETWEEN PERIODONTITIS AND THE RISK OF PALINDROMIC RHEUMATISM: A NATIONWIDE, POPULATION-BASED, CASE-CONTROL STUDY

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Background: Some patients with palindromic rheumatism (PR) may develop a chronic connective tissue disease, mainly rheumatoid arthritis (RA). About one to two-thirds of PR patients developed RA during a period of follow-up. Periodontitis (PD) has been found to be associated with RA risk. However, the association between PD and PR risk is unknown.
Objectives: To estimate the association between a history of PD and the risk of incident PR.
Methods: This study used a nationwide, administrative database to identify PR cases and non-PR controls. After exclusion of individuals with rheumatoid arthritis, systemic lupus erythematosus, Sjögren's syndrome, systemic sclerosis, dermatomyositis or polymyositis before the first PR diagnosis date (index date), we identified 4,421 newly-diagnosed PR cases from 2007 to 2012 and randomly selected 44,210 non-PR controls matched (1:10) for sex, age, and the year of the index date. After adjusting for comorbid diabetes mellitus, we estimated odds ratios (ORs) with 95% confidence intervals (CIs) by conditional logistic regression analysis to quantify the association between a history of PD and the risk of PR. The influences of the lag time and severity of PD were examined by calculating ORs for subgroups of patients based on time interval between the last PD-related visit and the index date and PD-related cumulative cost and visit number.
Results: This study showed an association between a history of PD and newly diagnosed PR (OR, 1.51; 95% CI, 1.41–1.61). The association remained significant after variation of PD definitions. The magnitude of the association was

Table 1. Univariable and multivariable conditional logistic regression analyses for the association between periodontitis defined by various definitions and the risk of palindromic rheumatism

	Univariable OR (95% CI)	Multivariable OR (95% CI)
Various periodontitis exposure definitions		
Periodontitis (ICD9: 523.3–5)	1.50 (1.41–1.60)	1.51 (1.41–1.61)
Chronic periodontitis (ICD9: 523.4)	1.36 (1.20–1.54)	1.37 (1.21–1.55)
Acute or chronic periodontitis (ICD9: 523.3–4)	1.56 (1.46–1.67)	1.57 (1.46–1.68)
Gingival and periodontal diseases (ICD9: 523)	1.56 (1.46–1.66)	1.56 (1.47–1.67)

greater in those who had shorter lag time between the last date of PD diagnosis and PR index date and those who had a higher number of visits for PD or greater cumulative cost of PD-related visits.

Conclusions: This study demonstrated a time- and dose-dependent association between PD exposure and PR risk.

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FRI0692 ALLOPURINOL AND THE RISK OF VENTRICULAR ARRHYTHMIAS IN THE ELDERLY: A STUDY USING U.S. MEDICARE DATA

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Background: Recent studies have shown that hyperuricemia and gout, a condition with hyperuricemia associated with joint inflammation and/or renal manifestations, are associated with a higher risk of coronary artery disease (CAD), acute cardiovascular events including myocardial infarction (MI) and stroke, and cardiovascular mortality. Emerging data suggest that gout and hyperuricemia may also be associated with cardiac arrhythmias such as atrial fibrillation

Objectives: To assess whether allopurinol use is associated with a reduction in the risk of ventricular arrhythmias (VA).

Methods: We used the 5% random sample of Medicare beneficiaries from 2006–2012 to examine new allopurinol use and the risk of incident VA. Multivariable Cox regression analyses were adjusted for demographics (age, race, gender), comorbidity, cardiac medications and conditions associated with VA. We calculated hazard ratios (HR) and 95% confidence intervals (CI).

Results: Of the 28,755 episodes of new allopurinol use, 2,538 were associated with incident VA (8.8%). Among patients with incident VA, 54% were male, 78% were White, and the mean Charlson-Romano comorbidity score was 4.8. The crude incidence of VA per 1,000,000 person-days declined as the duration of allopurinol use increased: 1–180 days, 151; 181 days-2 years, 105; and >2 years, 85. In multivariable-adjusted analyses, compared to non-use, allopurinol use was associated with lower HR of VA of 0.82 (95% CI, 0.76 to 0.90). Compared to allopurinol non-use, longer allopurinol use durations were significantly associated with lower multivariable-adjusted HR for VA: 1–180 days, 0.96 (95% CI, 0.85 to 1.08); 181 days to 2 years, 0.76 (95% CI, 0.68 to 0.85); and >2 years, 0.72 (95% CI, 0.60 to 0.87). Multiple sensitivity analyses adjusting for cardiac conditions, anti-arrhythmic drugs and alternate definitions confirmed our findings with minimal/no attenuation of estimates.

Conclusions: Allopurinol use and use duration >6 months were independently associated with a lower risk of VA. Future studies need to assess the pathophysiology of this potential benefit.

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FRI0693 SYNOVIAL CHANGES DETECTED BY ULTRASONOGRAPHY AND THEIR ASSOCIATION WITH OSTEOARTHRITIS-RELATED KNEE PAIN: A 1-YEAR PROSPECTIVE COHORT STUDY

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Background: Recently an important role for synovial pathology in the initiation and progression of knee osteoarthritis (OA) has been emphasised. Our previous cross-sectional study showed that synovial changes on US associated with knee pain (KP), but the association was confounded by radiographic severity [1]

Objectives: To examine whether these synovial changes associate with KP changes over 1 year.

Methods: 220 participants with early KP (<3yrs duration) identified from the Knee Pain and Related Health in the Community (KPIC, n=9514) survey in Nottingham, UK formed the cohort for this study. All participants had bilateral US and radiographic examination at baseline, and US was repeated after 1 year. KP was defined as pain in or around the knee on most days for at least a month, and KP severity was measured using a numerical rating scale (NRS 0–10). Change in KP severity was defined according to a Patient Global Impression of Change. Synovial changes (effusion, hypertrophy and Power Doppler (PD) signal) were measured by two observers (inter-observer concordance correlation was 0.8 (0.6 to 0.9) for effusion and 0.7 (0.5 to 0.9) for synovial hypertrophy). Standardised radiographs (semi-flexed weight-bearing and flexed skyline views) were scored using the Nottingham Line Drawing Atlas (NLDA). Radiographic OA was defined as definite joint space narrowing (grade 2) plus definite osteophyte (grade 2) in any compartment. An absolute change in effusion/synovial thickness/pain scores was calculated by subtracting the baseline measure from the follow-up measure within individuals. A correlation analysis was used to examine the association between changes in pain and changes in US values. Potential baseline predictors for KP worsening were examined using multivariate logistic regression analysis.

Results: Of 220 participants in this cohort, 165 (75%) had US measurements at baseline and follow-up (mean age 61yrs; 61% women; 24% ROA). The mean NRS score decreased from 4.44 to 3.01 mm. The mean depth of the effusion and synovial hypertrophy changed from 4.01 mm to 5.37 mm, and from 1.82 to 2.45 mm, respectively. There was no correlation between changes in pain on NRS and changes in US-detected synovial change (Figure 1).

At 1 year follow-up, 58% reported that their KP had improved from baseline, 16% reported worsening, and 27% reported no change in KP. After adjustment for age, gender and BMI baseline US features did not predict worsening pain, whereas ROA did (OR=4.06 95% CI 1.55 to 10.61).

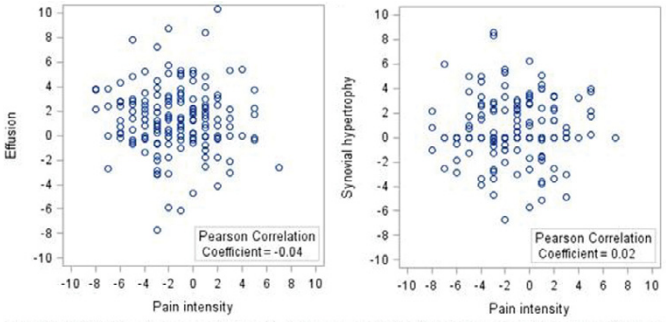

Figure 1. Correlation between changes from baseline in US features (in mm) and knee pain intensity (NRS 0-10)

Conclusions: This cohort study showed that US-detected knee "synovitis" was not a predictor of change in OA symptoms, whereas baseline radiographic OA severity was. It suggests that synovial changes detected by US might reflect aspects of OA pathology discrete from mechanisms driving OA pain change.

References:

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FRI0694 PREVALENCE OF RHEUMATIC DISEASE IN AN ADULT POPULATION FROM COLOMBIA. A COPCORD METHODOLOGY STUDY

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Background: Rheumatic diseases are the leading cause of permanent disability. In our country are the fourth cause of consultation in health institutions. The COPCORD model constitutes an effective tool in the determination of the prevalence of diseases. Globally, this model has been carried out in Asia, Europe and in some countries of Latin America. In Colombia the epidemiology of rheumatic diseases is not known globally; this would be the first national study that uses the data collection questionnaire using the COPCORD instrument