Abstract THU0110 –Table 1.

Table 1. Baseline characteristics of the matched RA cohort

	Patients with RA + SS (n=283)	Patients with RA only (n=283)
Age, years, mean (SD)	58.4 (12.2)	58.7 (12.8)
Sex, female	235 (83.0)	235 (83.0)
Duration of RA, years, mean (SD)	10.5 (10.0)	10.3 (9.7)
Co-morbidities		
CV disease*	32 (11.3)	31 (11.0)
Malignancy†	29 (10.2)	31 (11.0)
Serious infections‡	24 (8.5)	24 (8.5)
Anti-cyclic citrullinated peptide +, n/m (%)	56/114 (49.1)	66/119 (55.5)
RF+, n/m (%)	91/137 (66.4)	80/144 (55.6)
Erosive disease, n/m (%)	74/216 (34.3)	64/197 (32.5)
Subcutaneous nodules, n/m (%)	69/283 (24.4)	73/283 (25.8)
CDAI score, mean (SD)	24.0 (14.9)	24.1 (14.7)
Number of prior b/tsDMARDs		
0	116 (41.0)	121 (42.8)
1	77 (27.2)	70 (24.7)
≥2	90 (31.8)	92 (32.5)
Number of prior csDMARDs		
0	16 (5.7)	16 (5.7)
1	116 (41.0)	110 (38.9)
≥2	151 (53.4)	157 (55.5)

Data are n (%) unless otherwise stated
 *History of coronary artery disease, myocardial infarction, congestive heart failure requiring hospitalisation, acute coronary syndrome, unstable angina, cardiac revascularisation procedure, cardiac arrest, ventricular arrhythmia, stroke, transient ischemic attack or other CV event
 †History of lung cancer, breast cancer, lymphoma, skin cancer (melanoma and squamous cell carcinoma) or other cancer
 ‡Infection required hospitalisation or IV treatment
 b/tsDMARD=biologic or targeted synthetic DMARD; csDMARD=conventional synthetic DMARD; CV=cardiovascular; n/m=number of patients/total number of patients with available data; SS=Sjögren's syndrome

Abstract THU0110 –Table 2.

Table 2. Mean (SD) change in CDAI score and PROs from index visit to 12 month follow-up visit

	Patients with SS + RA (n=283)	Patients with RA only (n=283)	p value*
CDAI	8.8 (14.6)	9.3 (14.3)	0.704
Patient pain	6.5 (29.2)	14.0 (28.0)	0.002
Patient fatigue	4.3 (29.9)	13.0 (29.9)	0.001
Patient global assessment	5.5 (29.1)	13.0 (28.5)	0.002
Morning stiffness (min)	19.8 (245.2)	21.2 (250.7)	0.947

*Estimated using Student's t-tests
 PRO=patient-reported outcome

Results: After PSM, baseline characteristics in 283 pairs of pts with and without SS were well balanced (Table 1). Mean change in CDAI score was numerically lower in SS than non-SS pts (8.8 vs 9.3; Table 2), but this did not reach statistical significance. Improvements in pain, fatigue and stiffness were 2–2.5-fold greater for non-SS than SS pts (Table 2).

Conclusion: Among those initiating b/tsDMARD treatment, improvements in RA-related PROs were lower in pts with RA with SS than non-SS pts. Physicians may want to consider SS status secondary to RA when managing pts with RA and specifically explore whether additional intervention is needed to improve the pt experience for pts with RA.

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THU0111

ANGIOGENIC T CELLS AS AN INDEPENDENT PREDICTOR OF VASCULAR STIFFNESS IN VERY EARLY RHEUMATOID ARTHRITIS

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Background: Angiogenic T cells (Tang) are responsible of vascular repair and homeostasis. Decreased Tang frequencies have been reported in rheumatoid arthritis (RA), in association with disease activity and previous history of cardiovascular (CV) disease. However, excess of CV risk is already present during the early stage of RA. Whether Tang cells are associated with subclinical vascular abnormalities remains unknown.

Objectives: To evaluate whether Tang cells could be associated with subclinical CV endpoints (subclinical atherosclerosis and vascular stiffness) in the very early stage of RA.

Methods: Patients were recruited upon early referral to the rheumatology department. All patients were untreated at the time of sampling. Tang (CD3+CD31+CXCR4+) frequency was assessed by flow cytometry in peripheral blood samples. Plaque occurrence, cIMT and stiffness parameters were analyzed by Doppler ultrasound in internal carotid, middle cerebral and basilar arteries.

Results: 53 patients were recruited, 47 fulfilling 2010 ACR/EULAR classification criteria for RA (36 women, 26 FR+ and 26 ACPA+) and 6 fulfilling criteria for Clinically Suspect Arthralgia (CSA) (6 women, 3 RF+ and 2 ACPA+). Tang frequency did not differ between RA and CSA (p=0.382) and it was negatively associated with DAS28 (r=-0.448, p<0.001) and SDAI (r=-0.385, p=0.006), but not with duration of the symptoms (r=0.053, p=0.713). Tang levels were not related to individual traditional CV risk factors, body mass index, waist circumference (all p>0.050) nor with the modified SCORE (r=-0.173, p=0.244) or Framingham Risk Score (r=-0.127, p=0.399). Neither atherosclerosis plaque occurrence (r=0.631) nor the cIMT (r=0.070, p=0.652) were associated with Tang levels.

Tang frequency paralleled carotid peak systolic velocity (r=0.399, p=0.008) and end diastolic velocity (r=0.332, p=0.034) in internal carotid artery. Moreover, Tang positively correlated stiffness parameters: vascular strain (VS, r=0.428, p=0.010), vascular distensibility (VD, r=0.479, p=0.004), vascular stiffness (VSf, r=-0.519, p<0.001) and pressure-strain elastic modulus (PSEM, r=-0.531, p<0.015) in left internal carotid artery. Finally, Tang frequency was an independent predictor of stiffness parameters after adjusting for mSCORE, body mass index, DAS28, RF and ACPA positivity: VS (β=0.451, p=0.045), VD (β=0.462, p=0.026), VSf (β=-0.422, p=0.035) and PSEM (β=-0.446, p=0.026).

Conclusion: Tang cells may have a very early role on vascular stiffness in RA. These results point to the Tang subset as the missing link between disease activity and vascular abnormalities during the first stage of the disease.

Disclosure of Interests: None declared

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THU0112

SECULAR TRENDS IN THE INCIDENT RISK OF ACUTE MYOCARDIAL INFARCTION IN RHEUMATOID ARTHRITIS RELATIVE TO THE GENERAL POPULATION

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Background: Recent studies have demonstrated a declining trend in RA mortality relative to the general population (1). This improvement in mortality could be due to improvement in incident risk of cardiovascular events that are the leading cause of excess deaths in RA (2).

Objectives: Our objective was to assess secular trends in ten-year incident risk of acute myocardial infarction (AMI) in incident cohorts of RA versus general population controls, using administrative health data.

Methods: We conducted a retrospective study of a population-based cohort of incident RA cases who first met previously published RA criteria between 01/01/1997 and 31/12/2004 in British Columbia, followed until 12/2014, with general population controls matched 2:1 on gender, age, and index year. Individuals were excluded if they had a diagnosis of MI prior to index date. Incident AMI was defined as first AMI during follow-up using ICD codes (ICD-9 code 410/ICD-10 code I21) in Hospital Discharge data or death certificate in Vital Statistics data. RA and general population cohorts were stratified according to year of RA incidence,

defined according to first RA visit, using a 7-year wash-out period. Incident rates (IRs) of AML for RA and general population cohorts, as well as incident rate ratios (IRRs), with 95% confidence intervals (CI) were calculated per calendar years of incidence. Multivariable Cox Proportional Hazard models with left truncation were used to estimate risk of AML in RA relative to general population while controlling for potential confounders, with contribution of person time of follow-up starting from index date (second RA visit) to avoid immortal time bias and censoring at ten years from incident year, or last health care utilization. To examine whether secular trends differed in RA relative to general population, an interaction term was tested between the RA indicator and year of RA incidence. To account for non-linear effect of cohort year, we compared cox regression models with linear, quadratic, and flexible spline forms of the cohort-year effects and the model with the best AIC was used to interpret the data.

Results: 23,237 RA individuals (66.4% female; mean [SD] age 58[16.88] years) and 46,474 controls experienced 1,133 and 1,646 incident AML, respectively. Cox Proportion model with the lowest AIC best fit the data. Risk of AML was significantly higher in RA vs. general population [aHR (95% CI): 1.21(1.10, 1.32); $p < 0.001$]. A significant decline was observed in risk of AML over calendar year of incidence in both RA [0.94(0.92, 0.97); $p < 0.0001$] and controls [0.93(0.91, 0.95); $p < 0.0001$]. The decline in AML risk did not differ significantly in RA vs. general population [interaction $p = 0.555$].

Conclusion: Our finding suggests that the risk of AML has significantly decreased over time in RA and general population cohorts. However, the declining trend was not significantly different in RA compared to the general population.

Abstract THU0112 – Figure 1

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THU0113

RHEUMATOID ARTHRITIS ASSOCIATED INTERSTITIAL LUNG DISEASE, CLINICAL CHARACTERISTICS AND PREDICTORS OF MORTALITY

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Background: Interstitial lung disease (ILD) is a serious extraarticular manifestation of rheumatoid arthritis (RA) associated with excess mortality. No evidence-based approach to therapy for RA-ILD exists, but ongoing studies investigate the role of antifibrotic therapies for progressive fibrosing ILD, including progressive fibrosing RA-ILD.

Objectives: The aim of the present study was to investigate the frequency of progressive fibrosing ILD, the clinical characteristics and mortality of RA-ILD in a well-characterised, population-based cohort.

Methods: We identified patients with RA-ILD diagnosed and followed at the ILD referral center in Aarhus, Denmark between 2004 and 2016.

Adjusted hazard rate ratios for death were estimated using Cox regression models. The presence of progressive fibrosing ILD was assessed using recently proposed definitions of relative forced vital capacity (FVC) decline $\geq 10\%$, relative diffusion capacity of the lung for carbon monoxide (DLco) decline $\geq 15\%$ or worsening symptoms or a worsening radiological appearance accompanied by a $\geq 5 < 10\%$ relative decrease in FVC.

Results: We identified 102 patients with RA-ILD. Mean follow-up was 3.8 years and median survival was 7.1 years. Thirty-eight patients died during follow-up, and the majority of deaths were from respiratory causes. Predictors of mortality in a multivariate model were DLco and high titers of IgM rheumatoid factor, but not the presence of a UIP-pattern on high resolution computed tomography. Fifty-three patients (52%) had progressive fibrosing ILD.

	Progressive fibrosing RA-ILD n=53	Stable RA-ILD n=49	p-value	Typical UIP n=42	Probable UIP n=13	NSIP n=43	p-value**
Age (SD)	68.8 (9.6)	67.6 (11.7)	0.86	70.2 (9.7)	69.2 (7.3)	66.2 (12.1)	0.17
Female gender%	51	57	0.53	50	54	53	0.80
FVC (SD)	87.3 (24.7)	91.7 (24.2)	0.35	86.5 (25.1)	91.8 (30.6)	92.2 (21.7)	0.39
DLco	53.9 (17.9)	55.8 (14.6)	0.57	52.7 (15.9)	55.4 (21.7)	55.7 (14.5)	0.49
High titer of IgM RF n%*	36 (68)	28 (57)	0.16	33(79)	9 (69)	22 (51)	0.013*

* $>3 \times$ upper limit of normal

** typical and probable UIP vs NSIP

Clinical characteristics for progressive fibrosing RA-ILD and stable RA-ILD at the time of the ILD diagnosis and stratified by HRCT pattern.

Conclusion: Progressive fibrosing RA-ILD was common and the associated mortality was high. IgM rheumatoid factor and DLco were independent predictors of mortality.

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THU0114

MITIGATING MEDICATION RISK AVERSION IN THE CONFIDENT TREATMENT DECISIONS FOR LIVING WITH RHEUMATOID ARTHRITIS TRIAL

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Background: Controlling disease activity in RA using a treat-to-target (T2T) strategy can optimize clinical and patient-important outcomes. Yet, many patients are not familiar with T2T and report medication risk aversion as a major barrier to changing therapy.

Objectives: To develop and evaluate an educational, direct-to-patient video intervention aimed at improving willingness of patients to appropriately escalate treatment in RA.

Methods: We conducted a controlled, randomized trial of our intervention among US patients with self-reported RA enrolled in the ArthritisPower patient registry. We recruited participants by email, and surveyed their satisfaction with disease control, values about RA medications, decisional conflict and willingness to change treatment if/when recommended by their rheumatologist. Intervention group participants were invited to view up to 6 videos (3 required) relevant to T2T; those in the control group viewed 2 vaccination-related videos unrelated to T2T as an "attention control". The primary outcome, collected using surveys, was patient-reported willingness to change RA treatment, measured by the choice predisposition scale (0-10, anchors: "Not willing at all"; "Extremely willing") that reflected preference for RA treatment change. We compared the difference in pre-post differences in willingness to change RA treatment between the two groups using t-test.

Results: We invited 1264 RA patients by email. We reached our enrollment goal in 8 weeks. Study participants (N=208) were 90% Caucasian, 90% women, with mean (SD) age 50 (11) years, in good health (51%); 52% reported familiarity with T2T. A majority (89%) reported having values that favored RA medications. We observed no differences in baseline sociodemographics, patient global assessment of disease activity, health