troponin T, were identified through records of ED visits and cross-referenced to other registers. The outcome measure was ACS, defined as a discharge diagnosis of MI, unstable angina requiring urgent revascularisation, or death within 30 days (for directly discharged only). The association between RA and the outcome was assessed using logistic regression.

Results: ACS was more common in patients with RA (4.7%) than in subjects without RA (3.3%) – but this difference was largely attributable to RA patients being older and, upon taking age and gender into account, not statistically significant ($p=0.13$). Overall and across all individuals with chest pain and/or a troponin T test taken, RA was not associated with ACS when adjusting for age, demographics and comorbidity, odds ratio (OR) 1.24, 95% confidence interval (CI): 0.95–1.61. In analyses restricted to patients presenting with chest pain (irrespective of troponin T test status, $n=49\ 283$), a significant association between RA and ACS was observed (adjusted OR 1.40 95% CI 1.01–1.96).

Figure 1 Odds ratios for myocardial infarction (MI) in rheumatoid arthritis (RA) patients compared with unexposed. Patients with suspected MI in the emergency department (ED) grouped by presence of chest pain. Other chief complaints than chest pain labelled as atypical complaints. MI refers to combined outcome of MI or 30 day major cardiac event (MACE). * Model 1: adjusted for age, gender, hospital, year of ED visit. † Model 2: adjusted for age, gender, hospital, year of ED visit, smoking, estimated glomerular filtration rate (eGFR), hypertension, hyperlipidaemia, diabetes mellitus, obesity, atrial fibrillation, heart failure and previous cardiovascular disease. Previous cardiovascular disease meant having one of the following diagnoses: previous stroke or MI, angina pectoris or peripheral vascular disease.

Conclusions: Although RA was not an independent risk factor for ACS among all patients subjected to a cardiac diagnostic work-up in the ED, RA was an independent risk factor among patients presenting with chest pain as chief complaint, an association that was not readily explained by traditional cardiovascular risk factors. The combination of RA and chest pain should thus increase the suspicion of ACS.

Disclosure of Interest: None declared

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Abstract THU0138 – Table 1. Comparison between treated vessels in the MTX group and treated vessels in the non-MTX group

	Treated vessels in the MTX group (n=31)	Treated vessel in the non-MTX group (n=12)	p-value
General characteristics			
Female, n (%)	16 (51.6)	5 (41.7)	0.558
HTN, n (%)	19 (61.3)	5 (41.7)	0.245
Smoking, n (%)	Current smoker, 4 (12.9)	Current smoker, 1 (8.3)	0.615
Statin, n (%)	27 (87.1)	12 (100.0)	0.563
Other csDMARDs, n (%)	26 (83.9)	12 (100.0)	0.300
DAS28-CRP	1.54 (1.36–1.90)	1.51 (1.25–1.93)	0.547
Risk factors of ISR			
Age (year)	68.0 (60.0–71.0)	65.5 (59.0–73.0)	0.820
DM, n (%)	13 (41.9)	5 (41.7)	0.987
Vessel disease, n (%)	1-vessel disease, 13 (41.9) 2-vessel disease, 13 (41.9) 3-vessel disease, 5 (17.2)	1-vessel disease, 2 (16.7) 2-vessel disease, 8 (66.7) 3-vessel disease, 2 (16.7)	0.305
Ostial lesion, n (%)	3 (9.7)	2 (16.7)	0.608
LAD involvement, n (%)	18 (58.1)	4 (33.3)	0.146
Multiple lesions, n (%)	10 (32.3)	7 (58.3)	0.168
Type of DES, n (%)	Zotarolimus, 9 (29.0) Everolimus, 8 (25.8) Sirolimus, 12 (38.7) Paclitaxel+Cilostazol, 1 (3.2) Biolimus, 1 (3.2)	Zotarolimus, 1 (8.3) Everolimus, 6 (50.0) Sirolimus, 3 (25.0) Paclitaxel+Cilostazol, 2 (16.7) Biolimus, 0 (0.0)	0.161
Diameter (mm)	3.00 (3.00–3.50)	3.00 (2.81–3.00)	0.243
Length (mm)	29.0 (24.0–48.0)	21.0 (15.0–30.3)	0.018
ISR, n (%)	0 (0.0)	4 (33.3)	0.004

incidence was similar, but the time to ISR occurrence was much longer. In the comparison of patients receiving MTX ($n=31$ vessel lesions) and those not receiving MTX ($n=12$ vessel lesions), the ISR incidence was significantly different [0/31 (0.0%) vs. 4/12 (33.3%), $p=0.004$].

Conclusions: ISR after DES implantation in RA patients occurs in a similar rate, but after a much longer period of time than in the general population. Administration of MTX in patients with RA might have potential benefit to prevent ISR after DES implantation.

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THU0139 INCREASED HOMOCYSTEINE LEVEL FOR 7 YEARS IN PATIENTS WITH RHEUMATOID ARTHRITIS: TOMORROW STUDY

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Background: Osteoporosis is a disease in which not only bone density but also bone quality is low. Patients with rheumatoid arthritis (RA) are at higher proven risk of osteoporosis. Increased homocysteine (Hcy), one of the main markers of bone quality, is caused by insufficiency of folate or vitamin B. Elevation of Hcy inhibits physiological crosslink of collagen, which yields worse bone quality.

Objectives: In this study, we evaluated Hcy level as a bone quality marker in patients with RA for a period of 7 years and compared Hcy in RA patients with that in healthy volunteers (Vo).

Methods: We used the data for 7 years from a prospective cohort study (TOMORROW Study: UMIN000003876), which started in 2010 and compares data from RA patients with age- and sex-matched volunteer controls (Vo) recruited through mass media. Laboratory data were collected for all participants, including bone metabolic markers (urinary pentosidine, Hcy, collagen type 1 crosslinked N-telopeptide (NTX), and osteocalcin) and anthropometric parameters. Bone mineral density (BMD) of the lower leg was determined using whole-body dual-energy X-ray absorptiometry (DXA). Their parameters were compared with those of healthy controls, and multiple regression analysis was carried out

THU0138 OCCURRENCE OF IN-STENT RESTENOSIS AFTER CORONARY DRUG-ELUTING STENT IMPLANTATION IN PATIENTS WITH RHEUMATOID ARTHRITIS

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Background: Rheumatoid arthritis (RA) is associated with increased risk of cardiovascular events. Thus, patients with RA have a greater chance of undergoing coronary drug-eluting stent (DES) implantation. However, it is not known whether the rate of in-stent restenosis (ISR) is also increased in RA patients.

Objectives: To investigate characteristics of in-stent restenosis (ISR) after drug-eluting stent (DES) implantation in patients with rheumatoid arthritis (RA), and to evaluate the effect of disease modifying anti-rheumatic drugs (DMARDs) on ISR.

Methods: Patients with RA who underwent DES implantation between January, 2005 and March, 2017 were included. Characteristics of the patients and the vessel lesions were reviewed retrospectively. To evaluate the effect of DMARDs on ISR, previously known ISR risk factors and ISR incidence were compared between the treated vessels of patients who did and did not receive specific DMARDs.

Results: In total, 30 RA patients (43 vessel lesions) were included. 4 treated vessel lesions developed ISR (4/43, 9.3%) in median 106.8 (81.1–109.0) months after DES implantation. Compared with the previous data in general population (occurrence of ISR: 3%–20%, mean time of ISR occurrence: 13 months), the

only in the RA population. In RA patients, treatment regimen and Disease Activity Score 28 were recorded.

Results: There were 413 participants (208 RA patients and 205 in the Vo group; mean age, 58 years) enrolled in the study, 349 of whom were female. In RA patients (mean disease duration, 13 years), bone density was significantly lower ($p<0.001$, repeated-measures ANOVA) and Hcy ($p<0.0001$, repeated-measures ANOVA) was higher in comparison with the Vo group during the 7 year study period. In the analysis of change in Hcy level over 7 years, "RA" and "time" were found to interact with each other ($p=2.58e-7$, repeated-measures ANOVA) (figure 1). Multiple linear regression analysis in the RA population revealed a relationship between the level of Hcy and MTX dose at baseline ($p=0.048$), but no relationship between the level of Hcy and MCV ($p=0.165$).

Abstract THU0139 – Figure 1. Homocysteine level during the study period in the patients with rheumatoid arthritis (RA) and healthy volunteer (Vo)

Conclusions: MTX intake leads to folate deficiency, which is thought to cause elevation of the Hcy level. Ageing is another significant factor related to Hcy increase.

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THU0140 EFFECTS OF STATIN-TREATMENT ON CORONARY PLAQUES IN PATIENTS WITH INFLAMMATORY JOINT DISEASES

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Background: Statins have an established preventive effect on coronary artery disease in the general population. The effect of statins on coronary plaque progression and characteristics in patients with inflammatory joint diseases (IJD) is unknown.

Objectives: Our aim was to evaluate the change in coronary atherosclerosis in long-term statin-treated patients with IJD.

Methods: Sixty-eight patients with IJD and carotid artery plaque, underwent coronary computed tomography angiography before and after 4.7 (range 4.0–6.0) years of statin treatment. The treatment target for low density lipoprotein cholesterol (LDL-c) was ≤ 1.8 mmol/L. Changes in coronary artery calcification (CAC) and coronary artery plaque volume (calcified, mixed/soft and total) from baseline to follow-up were assessed using the 17-segment model of the American Heart Association. Linear regression analysis was used to identify predictors of atherosclerotic progression.

Results: Coronary plaques were present in 42% of the patients at baseline and in 51% at follow up. Mean CAC score increased with 173 ± 284 , calcified plaque volume with 39.4 ± 78.3 mm³ and total plaque volume with 22.8 ± 54.6 mm³ ($p\leq 0.01$, for all) (figure 1). Mean mixed/soft plaque volume decreased with -10.4 ± 27.5 mm³ ($p\leq 0.01$). At follow-up, 51% of the patients had obtained LDL-c treatment target. Compared to patients above LDL-c target, patients with an LDL-c ≤ 1.8 mmol/L experienced reduced median progression of both CAC (21^{2-143} vs. 69 [$16-423$],

$p<0.01$) and total plaque volume (0.08 [$-1.0-13.9$] vs. 13.0 [$0.0-60.8$], $p=0.02$) (table 1).

	LDL ≤ 1.8 mmol/L n=34	LDL > 1.8 mmol/L n=34	p-value*
LDL-c level baseline, mean $\pm$ SD	3.7 $\pm$ 0.9	4.4 $\pm$ 1.0	<0.01
LDL-c level follow-up, mean $\pm$ SD	1.5 $\pm$ 0.2	2.4 $\pm$ 0.7	<0.01
Change LDL-c level, mean $\pm$ SD	-2.2 $\pm$ 0.9	-1.9 $\pm$ 1.3	0.38
Change in CAC, median (IQR)	21 (2-143)	69 (16-423)	<0.01
Change in soft/mixed plaque volume, median (IQR)	0 (-3.5-0.0)	0 (-15.7-0.0)	0.71
Change in calcified plaque volume, median (IQR)	1.7 (0.0-17.3)	13.4 (1.5-107.6)	0.02
Change in total plaque volume, median (IQR)	0.08 (-1.0-13.9)	13.0 (0.0-60.8)	0.02

*independent samples t-test

Abstract THU0140 – Figure 1. Mean change in plaque volume (mm³)

Conclusions: We revealed a progression of atherosclerotic plaque volume in statin-treated patients with IJD, mainly due to calcifications. However, soft, unstable plaques were reduced, probably as a result of an alteration in plaque composition from mixed/soft plaques into calcified plaques. Patients with recommended LDL-c levels at follow-up experienced a reduced atherosclerotic progression compared to patients with LDL-c levels above the treatment target. Our results support the importance of treatment to guideline recommended lipid targets in IJD patients.

Disclosure of Interest: None declared

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THU0141 LONG-TERM EFFECTS ON BONE MINERAL DENSITY AFTER FOUR YEARS OF TREATMENT WITH TWO INTENSIVE COMBINATION STRATEGIES, INCLUDING INITIALLY HIGH DOSE PREDNISOLONE, IN EARLY RHEUMATOID ARTHRITIS PATIENTS: THE COBRA-LIGHT TRIAL

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Background: COmbinatie therapie Bij Reumatoide Artritis (COBRA)-light therapy (methotrexate and initially 30 mg/day prednisolone) has proven to be non-inferior to COBRA therapy (methotrexate, sulfasalazine and initially 60 mg/day prednisolone) in the first year of treatment of early rheumatoid arthritis (RA) patients.

Objectives: This study assessed changes in bone mineral density (BMD) after four years in early RA patients initially randomised to one year of COBRA or COBRA-light therapy.

Methods: In the open-label, randomised, non-inferiority trial patients were assigned to COBRA or COBRA-light therapy. After one year, treatment was at the discretion of the treating rheumatologists. BMD in g/cm² was measured at baseline, after one, two and four years at total hip, femoral neck, and lumbar spine with dual-energy X-ray absorptiometry (DXA).

Results: Of the 164 original patients, 154 could be assessed after a follow-up of four years (range 34 to 74 months); 68% were female; mean (SD) age at follow-up 52¹³ years. In the COBRA-light group, 11% of the patients used bisphosphonates after four years; the mean cumulative prednisolone dosage was 2.6 g (inter quartiles: 1.9; 5.9) and 49% of the patients had minimal disease activity (DAS44 <1.6).