trajectories demonstrated that 3683 of the stable, disease-associated chromosomal loops were shared by all 3. However, 4496 were associated with distinct response trajectories, with 1221, 2574 and 701 loops unique to R, NR and IR respectively.

Conclusion: The stable chromosomal architecture unique to each treatment trajectory suggests that various underlying molecular endotypes may exist. Moreover, the stable loops common to all groups allude to a baseline level of dysregulation in RA and offers the potential to discover novel drivers of disease. This work provides the foundation to further our understanding of RA pathogenesis and the potential of finding a biomarker that would be of significant value in a clinical setting.

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Disclosure of Interests: Caitlin Duncan: None declared, Ewan Hunter: None declared, Christina Koutsothanasi: None declared, Matthew Salter: None declared, Alexandre Akoulitchev: None declared, Iain McInnes Grant/research support from: Bristol-Myers Squibb, Celgene, Eli Lilly and Company, Janssen, and UCB, Consultant of: AbbVie, Bristol-Myers Squibb, Celgene, Eli Lilly and Company, Gilead, Janssen, Novartis, Pfizer, and UCB, Carl Goodyear: None declared

DOI: 10.1136/annrheumdis-2020-eular.5714

SAT0034

CLINICAL SIGNIFICANCE OF ANTI-CARBAMYLATED PROTEIN ANTIBODIES IN PREMENOPAUSAL RHEUMATOID ARTHRITIS WOMEN: RELATION TO DISEASE ACTIVITY AND BONE LOSS

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Background: Anti carbamylated protein anti carP are present in patients with Rheumatoid Arthritis RA and are associated with erosions. However their association with systemic or local bone loss in RA patients is still not confirmed.

Objectives: The purpose of this study was to measure the serum level of anti carP in premenopausal women with RA and determine its relation to disease activity and bone loss.

Methods: This case control study was conducted on forty eight RA premenopausal female patients diagnosed according to 2010 ACR/EULAR criteria and forty eight ages and body mass index matched healthy premenopausal females. RA patients with other autoimmune diseases, viral hepatitis malignancy or erosive joint disease and systemic diseases that affect bone quality were excluded from the study. All RA women were subjected to history taking, clinical examination, assessment of disease activity using disease activity score-28 DAS28 and clinical disease activity index CDAI functional assessment using health assessment questionnaire HAQ physical activity assessment using international physical activity questionnaire short form IPAQ fatigue assessment using modified fatigue impact scale MFIS, routine laboratory investigations, serological tests as well as Anti carP using ELISA kit. Moreover the bone mineral density was measured by a lunar Prodigy Advanced DEXA scanner system and plain x-ray of both hands and wrists in the anteroposterior view was done to assess the juxta articular osteopenia and erosions.

Results: Anti carP level was significantly higher in RA patients than in healthy controls table 1. The serum level of anti carP had a significant positive correlation with RA DAS, CDAI, HAQ, IPAQ, MFIS and erosion and joint space narrowing in original sharp score. Also the anti carP had a significant negative correlation with the bone mineral density BMD of spine. The AUC of anti carP level showed a high level of accuracy AUC 0.857 figure 1 and the calculated cutoff value >65 can precisely discriminate subjects with RA from those without RA with 85.42% sensitivity and 85.11% specificity.

Table 1. Comparison between the patient and healthy groups according to anti carP level

Anti-carp	RA patients	Healthy control	U	p
Min – Max	15.0 – 90.0	1.0 – 78.50		
Mean ± SD	71.24 ± 14.70	45.99 ± 21.99	322.0*	<0.001*
Median (IQR)	72.75 (70.5–78.3)	55.0 (32.5–61.5)

Figure 1. ROC curve for anti carP to diagnose RA patients from healthy subjects

Conclusion: Anti carbamylated antibodies were higher in premenopausal RA women compared to ages and body mass index matched healthy women. Anti carP are associated with higher RA disease activity, increased disability and decreased physical activity. Moreover anti carP are associated with systemic trabecular bone loss manifested by decreased bone mineral density of the spine as well as local bone loss as manifested by increased number of joint erosions in premenopausal RA women.

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Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.637

SAT0035

RESPONSE TO ABATACEPT OF DIFFERENT PATTERNS OF INTERSTITIAL LUNG DISEASE IN RHEUMATOID ARTHRITIS: NATIONAL MULTICENTER STUDY OF 263 PATIENTS

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