Figure. Observed proportions of patients with change from baseline in mTSS >SDC at week 52 based on baseline haemoglobin levels. ADA, adalimumab; BARI, baricitinib; CFB, change from baseline; Hb, haemoglobin; IR, inadequate response; mTSS, modified total Sharp score; MTX, methotrexate; PBO, placebo; SDC, smallest detectable change.

Figure A. RA-BEGIN (no/minimal previous MTX; N=545)

Figure B. RA-BEAM (MTX IR, on background MTX; N=1235)

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SAT0103 LONGITUDINAL PRE-DISEASE TO DISEASE SERUM SAMPLES IDENTIFY BIOMARKERS THAT ARE UPREGULATED PRIOR TO THE DIAGNOSIS OF RHEUMATOID ARTHRITIS

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Background: Rheumatoid Arthritis (RA) patients have autoantibodies reactive against several citrullinated peptides that develop 10-15 years before the clinical onset of disease. However, there is a more limited understanding of serological biomarkers of disease progression, specifically those that are upregulated in patients 6-18 months before the clinical diagnosis of RA.

Objectives: Identification of biomarkers that could classify patients 6-18 months before the clinical diagnosis of RA.

Methods: We identified 500 subjects with RA, 500 with Reactive Arthritis (ReA) (based on ICD9-CM code) as well as 250 age, gender and time-matched healthy control subjects from the Defense Medical Surveillance System (DMSS). For each subject, up to four serum samples were obtained from the Department of Defense (DoD) serum repository, 3 pre-disease diagnosis points and one immediately prior to or around disease

diagnosis. A discovery subset of these serum samples was assessed for soluble PD-1 (sPD-1), as well as 497 protein analytes measured by SomaLogic SOMAscan proteomic platform.

Results: Serum levels of sPD-1 increased over time from pre-diagnosis to RA but trended to decrease over time in ReA subjects and healthy controls. A composite score of 24 SOMAscan analytes associated with recently diagnosed RA increased in serum 6-8 months before RA diagnosis and, to a lesser extent, before ReA diagnosis. IFN-inducible chemokines CXCL9 (MIG), CXCL10 (IP-10), CXCL12 (I-TAC), and CXCL13 (BLC) increased over time preceding RA but not ReA diagnosis. Acute phase proteins (CRP, SAA, haptoglobin) and MMP-3 increased before diagnosis in serum samples from both RA and ReA patients. These protein analytes represent potential new biomarkers of early RA.

Conclusion: Samples from the US DoD serum repository have identified novel biomarkers (sPD-1 and IFN-inducible chemokines) of early RA that are elevated within 8 months of disease diagnosis. These protein analytes may afford the opportunity to develop novel biomarker(s) for diagnosis and disease progression to early RA. An understanding of the role of these proteins could provide increased insight into RA pathogenesis prior to disease diagnosis.

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SAT0104 INITIAL EVIDENCE FOR THE NEED OF A DUAL TREAT-TO-TARGET STRATEGY IN PATIENTS WITH RHEUMATOID ARTHRITIS

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Background: The treat-to-target (T2T) strategy has been established as a key concept in the management of patients with rheumatoid arthritis (RA) aiming to achieve remission or at least low disease activity [1]. However, it might be more important for patients to set individual treatment goals which are related to their specific life context. For this reason, Ferreira et al [2] recently proposed a dual T2T strategy including both biological remission and individual patient reported symptom remission. It is currently unclear how achieving biological remission and individual patient treatment goals overlap and whether patients who reach the T2T target also reach their individual treatment goals.

Objectives: To explore if achieving T2T biological remission and individual patient treatment goals overlap in RA patients with initially low, moderate, or high disease activity (LDA, MDA, HDA).

Methods: We recruited a consecutive convenience sample of patients with RA diagnosed according to ACR/EULAR criteria and with LDA, MDA, or HDA into this observational longitudinal study. Disease activity was measured with the Clinical Disease Activity Index (CDAI) and the individual patient goals were assessed with the Goal Attainment Scale (GAS) at baseline and after three to five months. The number and proportion of patients who reach the T2T target, but not their individual goals and vice versa were calculated.

Results: We enrolled 162 patients in the study (131 [80.9%] women, median age 59.0, IQR= 49-71). 101 patients (62%) had a follow up visit with no missing data after three months. Of these, 48 (47.6%) patients had LDA, 43 (42.6%) had MDA, and 10 (9.9%) had HDA at baseline. 62 patients (61.4%) reached remission (14.7%) or stayed in LDA (46.1%), and 66 patients (65.3%) achieved their individual goal(s) (Table 1). 18 (17.8%) patients did not achieve their individual treatment goals, even if T2T was successful and 22 (21.8%) patients achieved their individual goals despite not reaching remission or LDA.

Conclusion: Our results indicate that most patients achieving T2T attain their individual treatment goals but a respectable part of T2T outcomes