Results: Tc 99 m tilmanocept localised most effectively at the 200 µg mass dose 2–3 hours post- administration in RA subjects (cohort 4). Localization was observed in 60% of the subjects in joints of the bilateral wrists, hands, and knees. No localization was observed in HCs receiving the same mass dose (cohort 2).

Abstract AB0248 – Figure 1. Contrast of wrist and elbow of SC RA subject

Conclusions: Our findings represent a potential advance in the imaging of RA using a novel immunodiagnostic imaging strategy to specifically visualise macrophage-mediated elements of the RA disease process. This study demonstrates the potential for Tc 99 m tilmanocept to be used as an imaging tool for macrophage-mediated synovial inflammation in RA patients. This strategy can be used to identify patients at risk for activated macrophage-mediated joint damage, to quantify synovitis and disease activity, to provide further insight into immune-mediated mechanisms of RA, and to enable future targeted delivery of immunomodulatory therapeutics.

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AB0249 INFLUENCE OF AUTOANTIBODIES PROFILE ON DISEASE ACTIVITY MEASUREMENT IN A COLOMBIAN COHORT OF RHEUMATOID ARTHRITIS PATIENTS

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Background: Traditionally, the role of Rheumatoid Factor (RF) and/or Anti-citrullinated antibodies (ACCP) presence have characterised for diagnosis and prognosis of Rheumatoid Arthritis (RA). However, Anti-nuclear antibodies (ANA) are not routinely measured for the diagnosis of the disease or RA prognosis establishment during first appointment. Recently, evidence showed that positive ANA titles could be considered as poor prognosis factor for RA, and also a higher probability of developing immunogenicity against biologic therapies.

Abstract AB0249 – Table 1. Auto-antibodies profile, disease activity by DAS-28 ESR (initial and follow-up to 3, 12, 24 and 36 months) and mean weekly MTX dose in a Colombian cohort of RA patients

PROFILE (RF/ACCP/ANA)	DAS-28 (INITIAL)	DAS-28 (3 MONTHS)	N	DAS-28 (12 MONTHS)	N	DAS-28 (24 MONTHS)	N	DAS-28 (36 MONTHS)	N	MEAN WEEKLY MTX DOSE (mg)
—	3.317	.3072603	73	0.1267188	64	0.9367073*	41	0.8593334*	30	9.26
+-	3.375	-.2905715	7	-.5806667	6	-.2648572	7	0.17	4	10.82
++	3.434	.263663	92	0.6267033*	91	0.7705405*	74	0.6138596*	57	14.01
→	3.201	.0314815	27	-.2926087	23	0.1705263	19	0.8038461	13	10.2
++-	4.123	.8346712**	73	1.048**	66	1.23**	51	0.53	38	16.19
+++	3.542	.3822857	56	0.5656604*	53	0.71325*	40	0.8733333*	33	14.91
++	4.695	1.57*	12	1.77*	14	3.359	6	2.03	2	15.69
+++	4.118	.6474576*	118	0.9343478**	115	1.196**	86	1.25**	66	15.83

*p<-0.05 **p<0.001

Objectives: To compare the disease activity measurement from a Colombian cohort of patients with RA, based on their auto-antibodies profile.

Methods: The study used a cohort of Colombian patients with RA. A database was developed using the information from the clinical records. The data included were: RF, ACCP, ANA, and the disease activity measured using DAS-28 ESR. Disease activity results were obtained in the following periods of time: 0, 3, 12, 24 and 36 months. Patients were classified based on the different autoantibody profiles (RF/ACCP/ANA:—, +-, ++, →, +++, ++, ++, +++). Mean DAS-28 ESR results from each period of time were calculated. Also mean weekly Methotrexate (MTX) dose was calculated for each profile. Mean differences between initial, and the follow-up period were calculated using Kruskal-Wallis test. Statistical analysis was made using STATA 12.0 software.

Results: 635 patients with RA were included. 32% of them were men, and 68% were women. Mean age was 54.3 years. The most prevalent profile was +++with 118 patients, and the less frequent was +-. Patients with +++profile had the best response to treatment over time, but also they required more MTX dose. Less response during time was observed with +- profile, however the amount of patients from these group was relatively low. As it was expected, —profile patients required less weekly MTX dose (9.26 mg). It was interesting that patients with —+profile present a worst outcome based on DAS-28 activity, and less response to the treatment.

Conclusions: Results from the study suggest the importance of including the measurement of ANA titles in the initial categorization and follow-up of patients with RA. The presence of ANA seems to have a worst prognosis. ANA co-existence with ACCP appear to have a worst outcome, compared to +- or ++-profile. Auto-antibody profile in RA could direct the best therapeutic strategy for each patient. Validation of these results are required based on other cohorts.

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AB0250 ENDOTYPING OF ARTHRITIC PATIENTS USING NOVEL SEROLOGICAL BIOMARKERS

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Background: Accurate patient stratification is critical if medical professionals are to adopt a precision medicine approach when planning clinical trials or prescribing medication. This approach results in a superior level of drug response in the target group, a reduction in adverse effects and reduced costs for payers. Best practice treatment recommendations and disease activity markers such as DAS28, as opposed to a treat to target approach, guide current treatment of arthritic disease. There is currently a lack of tools to enable patient stratification, in part due to traditional biomarkers reflecting systemic inflammation rather than the target tissue.

Objectives: In this paper, we explore the use of a combination of novel tissue specific biomarkers for patient clustering with the objective of identifying different disease profiles.

Methods: Four biomarker substudy cohorts were pooled for this study, including two RA studies; LITHE (n=574) and OSKIRA-1 (n=131) and two OA studies; SMC1 (n=447) and SMC2 (n=81) all of which have been described in detail before. Whilst the principle focus was to examine RA patient profiles, OA studies were included to enrich the cohort with a non-RA population. OSKIRA and LITHE both had measurements at 24 weeks with additional measurements at 52 week s in LITHE.