0408, 1001) positive and SE negative. To overcome potential bias, multivariate logistic regression analysis was done in this retrospective cohort.

Results: They were divided into 47 SE positive patients (65.3%) and 25 SE negative patients (34.7%). The retention rate of abatacept treatment at week 52 were 95.3%/47.1% (SE positive/SE negative, $p < 0.0001$, log-rank test), respectively. Adjusted hazard ratio for abatacept discontinuation due to lack of efficacy was 8.94 (95% CI: 2.95–34.1, $p < 0.0001$, Multivariable Cox proportional hazards regression model) in SE negative group compared to SE positive group. The EULAR good response rate at week 24 were 74.5%/20.0% (SE positive/SE negative, $p < 0.0001$, Fisher's exact test), respectively. Simplified Disease Activity Index (SDAI) remission rate at week 24 were 55.3%/20.0% (SE positive/SE negative, $p = 0.004$, Fisher's exact test), respectively. Multivariate logistic regression revealed the odds ratio of EULAR good response and SDAI remission achievement in SE positive patients was 23.2 and 6.73 (95% CI: 5.10–152.0, $p < 0.0001$ and 1.70–32.3, $p = 0.006$), respectively.

Conclusions: Abatacept is strictly effective to SE positive RA patients.

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FRI0219 ASSOCIATION BETWEEN CONVERSION TO ACPA/RF SERONEGATIVE STATUS AND CLINICAL OUTCOMES FOLLOWING TREATMENT WITH ABATACEPT IN COMBINATION WITH METHOTREXATE COMPARED WITH METHOTREXATE ALONE IN PATIENTS WITH EARLY RHEUMATOID ARTHRITIS AND POOR PROGNOSTIC INDICATORS

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Background: RA is characterized by the production of autoantibodies, including anti-citrullinated protein antibodies (ACPA) and RF, which are associated with poor prognosis in RA.^{1–3} More data on the clinical significance of ACPA/RF seroconversion in response to treatment are needed. Evidence suggests a role for T cells in ACPA production.^{2,3}

Objectives: This *post hoc* analysis investigated the effect of the T-cell co-stimulation modulator abatacept (ABA) in combination with MTX vs MTX alone on conversion of ACPA positive (+) and RF+ patients (pts) to seronegative status, and the relationship between conversion to seronegative status and clinical response.

Methods: Data from a double-blind, randomized, Phase III study (AGREE; NCT00122382) conducted in MTX-naïve pts with early RA (≤ 2 years) and poor prognostic factors (ACPA+ and/or RF+ with evidence of erosions) were included.⁴ Pts were randomized to ABA (~10 mg/kg IV according to weight)+MTX or placebo+MTX (MTX alone) in a 12-month (M) double-blind phase followed by 12M of open-label ABA+MTX. Autoantibody titres were assessed at baseline and 6M and 12M of the double-blind phase by ELISA. Pts with titres below the threshold for positivity (ACPA 5 AU/mL; RF [IgM] 15 IU/mL) at M6 or M12 were considered to have converted to seronegative status. The relationship between conversion to ACPA seronegative status and clinical response at M6 and M12 was determined. All analyses were descriptive and based on pts with available DAS28 (CRP) and CDAI data at baseline and M6 and M12.

Results: A total of 435 and 461 pts, respectively, were ACPA+ or RF+ at baseline and had known serostatus at M6 and M12. At 6M, 6.6% (15/227) and 17.0% (39/230) of ABA+MTX pts were ACPA and RF negative, respectively, vs 2.9% (6/208) and 9.5% (22/231) of MTX pts. At 12M, 7.1% (15/212) and 18.5% (41/222) of ABA + MTX pts were ACPA and RF negative, respectively, vs 4.5% (9/198) and 14.6% (32/219) of MTX pts. A higher proportion of pts receiving ABA + MTX who converted to ACPA seronegative status achieved remission (DAS28 [CRP] < 2.6 or CDAI ≤ 2.8) compared with ABA + MTX-treated pts who remained ACPA+ or with pts treated with MTX alone regardless of whether they converted to seronegative status or not (Figure). Pts receiving ABA + MTX who converted to ACPA seronegative status also had a numerically higher cumulative probability

of achieving sustained remission (DAS28 [CRP] < 2.6) and lower radiographic progression than pts receiving MTX who converted to seronegative status or pts in either treatment group who remained ACPA+ (data not shown).

Figure. Proportion of Patients Achieving Remission, According to DAS28 (CRP)-Defined or CDAI Criteria, by ACPA Seronegative/Seropositive Status

Baseline to Month 6 and baseline to Month 12 were carried out as separate analyses.

Conclusions: Compared with MTX alone, treatment with abatacept + MTX was more likely to result in conversion to ACPA/RF seronegative status in pts with early erosive RA. Conversion to ACPA seronegative status was associated with better clinical and radiographic outcomes.

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FRI0220 ALLOGENEIC MESENCHYMAL PRECURSOR CELLS (MPCs): A NOVEL APPROACH TO TREATING BIOLOGIC REFRACTORY RHEUMATOID ARTHRITIS

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Background: Allogeneic STRO-3 immunoselected mesenchymal precursor cells (MPCs) derived from bone marrow of healthy donors are a potent, homogeneous cell population which can be activated by pro-inflammatory cytokines to release factors which polarize pro-inflammatory monocytes and T cells to an anti-inflammatory state. This is the first in human trial to assess MPC therapy in biologic refractory RA, a disease driven by monocyte and T cell activation.

Objectives: To assess the safety and tolerability and to explore the clinical efficacy of MPC therapy in RA.

Methods: MSB-RA001 is a phase 1B/2A randomized, double-blind, placebo-controlled, sequential, dose-escalation trial to assess the safety and explore efficacy of a single intravenous (IV) infusion of MPCs in patients with active RA who had failed to respond to at least one biologic. Efficacy endpoints included ACR 20,50,70, ACR core components, HAQ and DAS28. Patients were randomized to receive one IV infusion of MPC 1 million cells/kg (n=16), 2 million cells/kg (n=16), or placebo (n=16) in 2 sequential dose cohorts. The primary study period was 12 weeks.

Results: Patients in all 3 treatment groups (N=16 per group) were comparable in mean age (55 y), gender (73% women), duration of RA (14 years) and