079. DO ULTRASOUND (POWER DOPPLER ULTRASONOGRAPHY) AND DISEASE ACTIVITY SCORE-28 MEASURE DIFFERENT ASPECTS OF DISEASE ACTIVITY? ANALYSES FROM AN OPEN-LABEL STUDY OF POWER DOPPLER ULTRASONOGRAPHY RESPONSE PATIENTS WITH RHEUMATOID ARTHRITIS PATIENTS STARTING ABATACEPT

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Background: A composite[power Doppler/greyscale US [PDUS)] synovitis score, developed by the OMERACT–EULAR–Ultrasound Task Force, was shown to be responsive in RA patients with inadequate response to MTX who were treated with abatacept (ABA); a rapid parallel change in PDUS and DAS for 28 joints (DAS28) was demonstrated. Data from clinical studies that have utilized PDUS indicate that it could be useful in monitoring RA treatment effects; however, discordant correlations have been found between ultrasound scores and clinical outcomes measured at the same time point. In this secondary analysis of the APPRAISE study, we explored correlations between changes in PDUS and clinical scores.

Methods: Individual joint PDUS scores were combined in the Global OMERACT-EULAR Synovitis Score (GLOESS) of metacarpophalangeal joints 2–5 (primary objective), reduced joint set (9 paired) and all examined joints (22 paired). Correlation between changes in GLOESS and clinical scores were assessed through: effect size, expressed as standardized response means of GLOESS and mean changes in DAS28 from baseline to weeks 1, 12 and 24; Pearson's correlation coefficient, for assessing correlation between early and late changes in DAS28, and early and late changes in all GLOESS scores; and Spearman's correlation coefficient, for assessing correlation between early changes in GLOESS and lower levels of synovitis at week 24. Furthermore, the relationship between GLOESS and clinical response was explored by analysing the correlation between changes from baseline in the number of tender and swollen joints and matched joint GLOESS.

Results: No significant correlations were found between: changes from baseline in DAS28 and GLOESS, or component scores (synovial hypertrophy, PD, joint effusion) at any time point; or between early (baseline to weeks 1, 2 or 4) changes in GLOESS, or components, and changes in the sum of swollen joints from baseline to weeks 12 or 24. Within the assessment method, i.e. between clinical scores, or between GLOESS at different time points, moderate-to-high correlations were found between early (to week 12) and late (week 24) improvements in DAS28, and similarly between changes in GLOESS (any joint set): Pearson's coefficient range 0.37–0.71. Only changes in GLOESS at week 12 were able to differentiate between early versus late clinical responders.

Conclusion: PDUS is a responsive measure of joint activity in patients starting abatacept, but the extent of PDUS response does not correlate with extent of clinical response. This suggests that PDUS adds independent information on response to treatment which needs to be explored further. This study was supported by Bristol-Myers Squibb.

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