Change from subcutaneous to intravenous abatacept and back in patients with rheumatoid arthritis as simulation of a vacation: a prospective phase IV, open-label trial (A-BREAK)

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BACKGROUND
Vacation can present a major problem to patients with rheumatoid arthritis (RA) treated with weekly subcutaneous biologics, including subcutaneous (SC) abatacept. Therefore, the replacement of four SC doses of abatacept by a single dose of intravenous (IV) abatacept may present an acceptable alternative to cover a 4-week interval needed for vacations. In the study presented, we analyzed the efficacy and safety of this intervention followed by a switch back to SC abatacept after 4 weeks.

METHOD
This open-label, prospective, single-arm, 24-week trial recruited patients with established RA in low disease activity (LDA) or in remission on treatment with SC abatacept for at least 3 months to receive a single dose of IV abatacept (baseline) followed by a break of 4 weeks and then continuation of weekly SC abatacept from day 28 on. Disease-modifying anti-rheumatic drug (DMARD)-inadequate or biologic-inadequate responders (or both) were included.

RESULTS
The baseline characteristics of the 49 patients (per protocol) were typical for a cohort of RA patients with established disease (mean disease duration of 8.31 years) in LDA under treatment with synthetic DMARDs and a biologic. Two patients (one flare and one patient decision) dropped out of the study. The proportions of patients with disease activity score in 28 joints (DAS-28) of not more than 3.2 at day 28 were 93.9 % (95 % confidence interval (CI) 83.5-97.9) and 93.6 % (95 % CI 82.8-97.8) at the end of the study (day 168). The average DAS-28 values were 1.74 (standard deviation (SD) ± 0.72) at baseline, 2.03 (SD ± 1.03) at day 28, and 1.96 (SD ± 0.92) at the end of the study (day 168). Pre-exposure to IV abatacept and having failed methotrexate or anti-tumor necrosis factor (anti-TNF) did not influence the average DAS-28 or the proportion of patients maintaining LDA over time. The average health assessment questionnaire disability index (HAQ-DI) was stable throughout the study. Adverse events (AEs) occurred in 75 % of subjects. Four serious AEs
were described during the study. None of them was related to the investigational product, and all serious AEs could be resolved during hospitalization.

CONCLUSION
This prospective, open-label study of abatacept shows for the first time that switching from weekly SC to IV abatacept and back after 4 weeks is an effective and safe way to bridge vacations in RA patients in LDA or remission. (NCT1846975, registered April 19, 2013.).