Background: Persistence rates of biologic disease modifying antirheumatic drugs (bDMARDs), which refer to the duration of time from initiation to discontinuation or switch of therapy, have been shown to vary considerably depending on the country, types of health centers, as well as the specific drug being investigated. Evidence on treatment persistence of psoriatic arthritis (PsA) patients in Germany is scarce.

Objectives: Our aim was to study drug survival of bDMARDs in a German real-world cohort of adult biologic-naive psoriatic arthritis patients.

Methods: We utilized the German "Institut für angewandte Gesundheitsforschung Berlin" (InGef) research database consisting of about 4 million covered lives structured to represent the German population in terms of age and gender according to the Federal Office of Statistics (DESTATIS). Thereof, 2.9 million patients were continuously enrolled in the study period spanning from January 1st, 2013 and December 31st, 2018. For the analysis of persistence rates, the study population was defined based on the International Classification of Diseases, German Modification (ICD-10-GM) and claims records of biologic prescriptions based on ATC codes. Adult patients who had a diagnosis of psoriasis arthritis (L40.5 in combination with M07.0 or M07.2 or M07.3) in the inpatient or outpatient setting, and a claims record of biologic treatment licensed for psoriasis arthritis between January 1st, 2014 to December 31st, 2017 were identified. The one-year overall persistence of active bDMARDs. Kaplan-Meier curves were plotted to show the persistence of bDMARDs. Kaplan-Meier curves were plotted to show the persistence of biologic drugs. The log-rank test was used to test for differences in the 1-year persistence rate.

Results: Among 10,954 patients with a diagnosis of PsA, 348 biologic-naive patients aged 18 years or above were identified. The one-year overall persistence rate was 57.5% for all bDMARD compounds. Reasons for non-persistence were switches to a different bDMARD agent in 15.8% of patients and 26.7% discontinued treatment. The highest persistence rate was observed for ustekinumab (81.3%), which was significantly higher than the reasons for adalimumab (58.1%), certolizumab pegol (51.7%), etanercept (51.0%), or secukinumab (54.7%).

Conclusion: Persistent rates for a real-world cohort of German PsA patients are modest with significant variations among different bDMARD therapies.