Background: Methotrexate (MTX) is the most common first-line disease-modified anti-rheumatic drugs in psoriatic arthritis (PsA), despite the controversies.

Objectives: In this study, we aimed to determine the rate of withdrawal rate of MTX in PsA and reasons for discontinuing.

Methods: A large prospective international multicenter PsA registry was used for this study. Data were collected either at enrolment, based on history, or prospectively if there was a follow up. We analyzed the frequency of MTX usage, discontinuation and the reason for discontinuation. The time on MTX was compared according to the reason of discontinuation (inefficacy vs side effects) using Kaplan-Meier and Cox regression analyses to identify risk factors for discontinuation.

Results: At the time of analysis, 1670 patients had been recruited to the registry and 1359 PsA patients had used MTX during the course of the disease (81.3%). Within these, 942 (69.3%) were still on MTX at the time of analysis, and 417 (30.7%) patients have discontinued (Table). The most common reasons for withdrawal were side effects (219/417, 52.5%) and ineffectiveness (88/417, 21.1%). Other reasons included pregnancy, remission, self-decision (11.9% for all). For 60 patients (14.3%), the reason could not be identified. In patients who were still on MTX, the median duration of MTX therapy was 31 months (IQR=59) compared to 17 months (IQR=43) in the withdrawal group. The most common side effects were gastrointestinal symptoms (47%) and abnormal liver function tests (25%). There was a significant difference in survival plots (Log-rank p=0.026) with discontinuing due to side effects occurring earlier than inefficacy (Figure 1).

In cox regression model, longer disease duration was found as an independent predictor of MTX discontinuation due to all reasons [Hazard Ratio (HR)=1.01, 95% Confidence interval (CI)=1.0-1.02; p=0.003].

Conclusion: MTX is frequently used on PsA treatment, despite the controversies in the literature. One third of patients with PsA discontinue MTX, most commonly due to side effects or inefficacy. Patients discontinue MTX earlier in case of having side effects. Longer disease duration is linked to MTX discontinuation.