A substantial portion of patients who initiate biologic therapy experience treatment discontinuation due to factors such as the development of drug antibodies, loss of efficacy, and inadequate response. Our study, which excluded patients in remission, aimed to identify factors associated with treatment discontinuation in patients enrolled in TARGET-IBD, a real-world observational registry of patients with IBD.

Methods
Patients receiving care in 34 community and academic practices in the US were enrolled in TARGET-IBD, a longitudinal cohort study of IBD patients, began in 2017. Participants starting a biologic (anti-TNF, anti-IL-12/23) who had no biologic use in the previous 6 months were eligible for analysis. The primary outcome was biologic treatment discontinuation. Kaplan-Meier methods and multivariable Cox proportional hazards regression were used to estimate time to treatment discontinuation.

Results
The most common reasons for treatment discontinuation were loss of response, side effects, and primary non-response. If the number of patients with anti-drug antibodies is added, the magnitude of secondary loss of response is even greater. In this study, the durability of vedolizumab/ustekinumab appears to be greater than anti-TNF agents.

Summary of Main Findings
• In this cohort of IBD patients initiating biologic therapy, nearly 1/3 discontinued therapy during the course of observation (mean time to discontinuation or censoring = 383 days).
• The most common reasons for treatment discontinuation were secondary loss of response, side effects, and primary non-response.
• If the number of patients with anti-drug antibodies is added, the magnitude of secondary loss of response is even greater.

Conclusions
• The durability of biologic treatment remains a significant issue in IBD management.
• Strategies to mitigate both primary non-response and, especially, secondary loss of response need to be explored among patients with IBD.
• Future research should explore potential strategies to improve durability such as therapeutic drug monitoring and genetic variants leading to differential response.

The durability of vedolizumab or ustekinumab seen in this study may have implications for “sequencing” of biologic therapy.