

# Impact of Early Endoscopic Remission After Advanced Therapy on Long-Term Complications in Crohn's Disease: Findings From Target-IBD

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## Background

- Despite growing emphasis on treat-to-target strategies,<sup>1</sup> evidence on the long-term impact of achieving endoscopic remission early in the treatment course, particularly following initiation of advanced therapies, is limited
- Understanding the impact of early endoscopic remission on the patient's journey could inform clinical decision-making and optimize treatment sequencing
- This study evaluates whether early endoscopic remission after initiation of advanced therapy is associated with reduced long-term complications in routine care

## Methods

### Data source

- TARGET-IBD – U.S. longitudinal registry of patients with inflammatory bowel disease across 13 community-based and 23 academic sites

### Study population

- Adults with clinician-diagnosed CD initiating a new advanced therapy between October 2014 and September 2021 and who had at least one endoscopy 3-12 months after AT initiation

### Early endoscopic remission (3-12 months after advanced therapy initiation)

- SES-CD ≤4 or SES-CD ≤3 for ileal-only disease or equivalent narrative report
- Assessed on post-initiation endoscopy

### Outcomes

- Fistula, abscess, obstruction, IBD-related surgery, hospitalization, and rescue corticosteroid use

### Follow-up

- From AT initiation (index) until death, registry withdrawal, loss to follow-up, or end of study

### Analysis

- Cumulative counts over 3 years were estimated using a cumulative-count estimator for right-censored data
- Adjustment for baseline characteristics, censoring, and missingness using inverse probability weighting
- Effect estimates are adjusted cumulative count differences (early vs no remission) with bootstrapped 95% confidence intervals (CI)

## Patient characteristics

**Table 1. Baseline characteristics of CD patients initiating advanced therapy, overall and by remission status<sup>a,b</sup>**

Characteristic	Total (n=391)	Early Remission (n=172)	No Remission (n=219)
<b>Age at index (years)<sup>c</sup></b>	40.0 (29.0-54.5)	40.5 (30.8-55.2)	40.0 (28.0-52.0)
<b>Sex</b>			
Female	207 (52.9%)	92 (53.5%)	115 (52.5%)
Male	184 (47.1%)	80 (46.5%)	104 (47.5%)
<b>Race</b>			
Asian	5 (1.3%)	3 (1.8%)	2 (0.9%)
Hispanic/Latinx	20 (5.3%)	9 (5.4%)	11 (5.1%)
Non-Hispanic Black	39 (10.3%)	14 (8.4%)	25 (11.7%)
Non-Hispanic White	303 (79.7%)	134 (80.7%)	169 (79.0%)
Other	13 (3.4%)	6 (3.6%)	7 (3.3%)
<b>Insurance type</b>			
Private	272 (77.1%)	119 (76.3%)	153 (77.7%)
Other	81 (23.0%)	37 (23.8%)	44 (22.3%)
<b>Age at diagnosis (years)<sup>d</sup></b>			
A1: <17 years	71 (19.2%)	24 (15%)	47 (22.5%)
A2: 17-40 years	218 (59.1%)	99 (61.9%)	119 (56.9%)
A3: >40 years	80 (21.7%)	37 (23.1%)	43 (20.6%)
<b>Disease duration (years)<sup>d</sup></b>	10 (4, 19)	9 (4, 20)	10 (4, 18)
<b>Advanced therapy class at index</b>			
Anti-TNF alpha	158 (40.4%)	82 (47.7%)	76 (34.7%)
Anti-integrin agents	82 (21.0%)	32 (18.6%)	50 (22.8%)
Anti-IL-12/23 agents	144 (36.8%)	55 (32.0%)	89 (40.6%)
JAK inhibitors	7 (1.8%)	3 (1.7%)	4 (1.8%)
<b>Line of advanced therapy</b>			
1st line	182 (46.5%)	93 (54.1%)	89 (40.6%)
2nd line or later	209 (53.5%)	79 (45.9%)	130 (59.4%)
<b>CD phenotype</b>			
Inflammatory	150 (39.5%)	66 (39.5%)	84 (39.4%)
Stricturing	106 (27.9%)	45 (26.9%)	61 (28.6%)
Fistulizing	124 (32.6%)	56 (33.5%)	68 (31.9%)
<b>CD location</b>			
Colon	67 (18.5%)	31 (19.7%)	36 (17.6%)
Ileocolon	208 (57.5%)	82 (52.2%)	126 (61.5%)
Ileum	87 (24.0%)	44 (28.0%)	43 (21.0%)
<b>Any extraintestinal manifestation (EIM), n (%)</b>	211 (54.0%)	95 (55.2%)	116 (53.0%)
<b>Comorbidities, n (%)</b>			
Inflammatory arthritis (RA, PsA, gout, SLE, fibromyalgia)	32 (8.2%)	15 (8.7%)	17 (7.8%)
Anemia	133 (34.0%)	55 (32.0%)	78 (35.6%)
Tobacco use (current or former)	139 (35.6%)	60 (34.9%)	79 (36.2%)

<sup>a</sup>Values are n (column %) for categorical variables and median (interquartile range) for continuous variables.

<sup>b</sup>Percentages may not sum to 100% due to rounding.

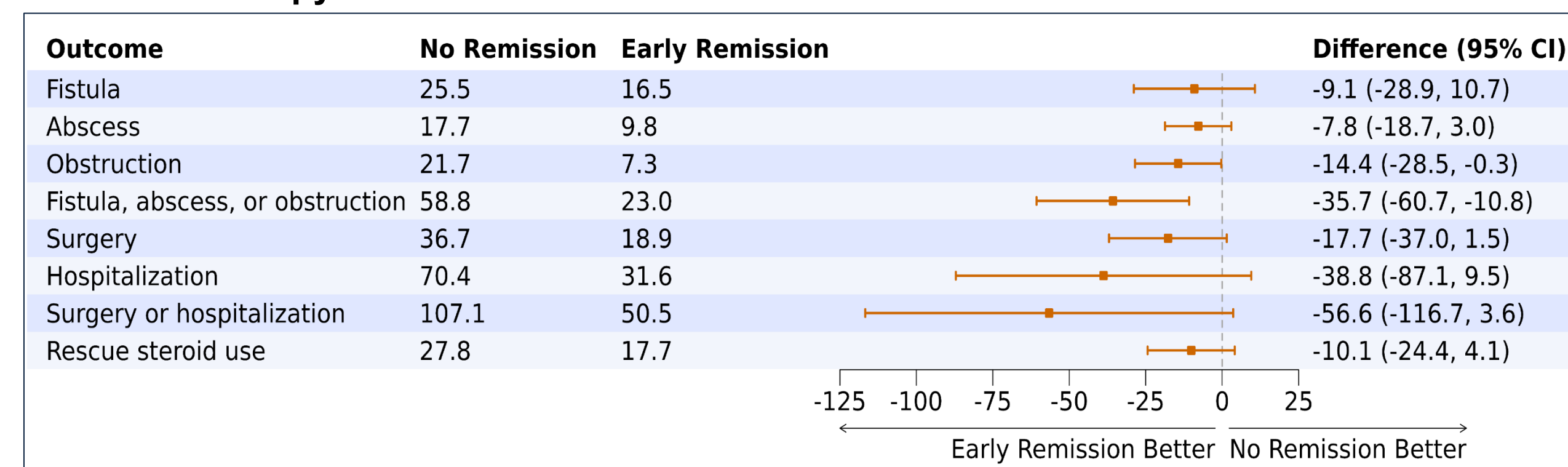
<sup>c</sup>Index date = the date of initiation of advanced therapy; baseline period = the 6 months prior to index.

<sup>d</sup>Approximation based on year of diagnosis.

## Results

- Sample size:** 391 patients initiating advanced therapy for CD
- Median follow-up:** 56 months (interquartile range: 44-67)
- Advanced therapies at index:** anti-TNF alpha (40%), anti-integrin agents (21%), anti-IL-12/23 agents (37%), and JAK inhibitors (2%) (**Table 1**)
- Disease characteristics at index (**Table 1**):**
  - Inflammatory (40%), fistulizing (33%), and stricturing disease (28%)
  - Colonic (19%), ileocolonic (58%), and ileal (24%)
- Early endoscopic remission was achieved by 172 patients (44%)
- By 3 years after therapy initiation, early remitters had lower cumulative counts of CD-related complications than non-remitters (**Figure 1**)
- By 3 years, early remitters experienced:
  - 36 fewer fistula, abscess, or obstructions per 100 patients (23.0 vs 58.8; adjusted difference = -35.7, 95% CI: -60.7 to -10.8)
  - 57 fewer surgeries or hospitalizations per 100 patients (50.5 vs 107.1; adjusted difference = -56.5, 95% CI: -116.7 to 3.6)

**Figure 1. Adjusted number of events per 100 patients within 3 years of initiation of a new advanced therapy<sup>a</sup>**



<sup>a</sup>Adjusted for baseline characteristics, censoring, and missingness through inverse probability weighting. Propensity score model variables included age at index, sex, race, insurance type, age at diagnosis, advanced therapy class at index, line of advanced therapy, CD phenotype and location, presence of any EIM, arthritis, anemia, tobacco use, geographic region, BMI category, albumin level, hemoglobin level, and use of antibiotics, biologics/biosimilars, immunomodulators, or steroids during baseline period.

## Conclusions

- In this real-world cohort, early endoscopic remission (3-12 months) after advanced therapy initiation was associated with substantially lower cumulative counts of disease-related complications
- These findings support early endoscopic remission as a clinically meaningful treatment target associated with reduced long-term disease burden



<https://bit.ly/4cuUh0z>

## Reference

- Turner D, et al. *Gastroenterology*. 2021;160(5):1570-1583.