



Early Biologic Therapy Reduces Complications in Ulcerative Colitis

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Background

- Ulcerative colitis (UC) is a heterogeneous and unpredictable disease with the potential for disease worsening over time and should be regarded as a progressive disease.
- More recent evidence and clinical practice guidelines suggest that biologic therapy is a preferred initial therapy in treating moderate to severe UC.
- Little research has been done to determine the optimal timing for the initiation of biologic therapy.
- Data on the impact of early intervention in UC are limited, and whether more intensive treatments prevent structural and functional complications is still debated.

Hypothesis

We hypothesize that early initiation of biologic therapy (specifically within 2 years of diagnosis) will lead to fewer UC-related complications and higher response rates.

Methods

- Retrospective cohort study of UC patients treated within the Military Health System to assess the relationship of timing of initiation of biologic therapy and UC-related complications.
- Data was collected from the military's universal electronic health record from January 1, 2013 to December 30, 2020.
- Clinical course was determined using clinical, biochemical, radiologic, and endoscopic/histologic findings.
- Complications assessed included UC-related emergency room visits, steroid use, hospitalizations, and surgeries.

Results

- 371 patients with UC were identified.
 - 181 started on biologic therapy within 2 years of diagnosis.
 - 190 started on biologic therapy 2 or more years after diagnosis.
- Patients started on early biologic therapy were statistically older and were less likely to have been prescribed thiopurines prior to biologic therapy. (Table 1)
- Patients started on late biologic therapy were more likely to be male and to identify as white. (Table 1)
- Patients started on biologic therapy within 2 years of diagnosis were statistically less likely to experience a complication. (Figure 1 and Table 2)

Table 1: Demographic Data

	<2 (n,%)	>2 (n, %)	P-value
Male	106 (59%)	138 (73%)	0.0042
Race			0.0211
White (non-Hispanic)	32 (18%)	64 (34%)	
White (Hispanic)	49 (27%)	42 (22%)	
Black	41 (23%)	49 (26%)	
Asian	18 (10%)	13 (6.8%)	
Native American	1 (0.5%)	2 (1.0%)	
Pacific Islander	1 (0.5%)	2 (1.0%)	
Unknown or not reported	39 (22%)	18 (9.5%)	
Age of diagnosis	33.4 ± 11.4	30.8 ± 10.6	0.0218
BMI	27.6 ± 5.5	28.1 ± 5.2	0.1555
Thiopurine use	55	98	<.0001

Figure 1: Survival without composite of complications

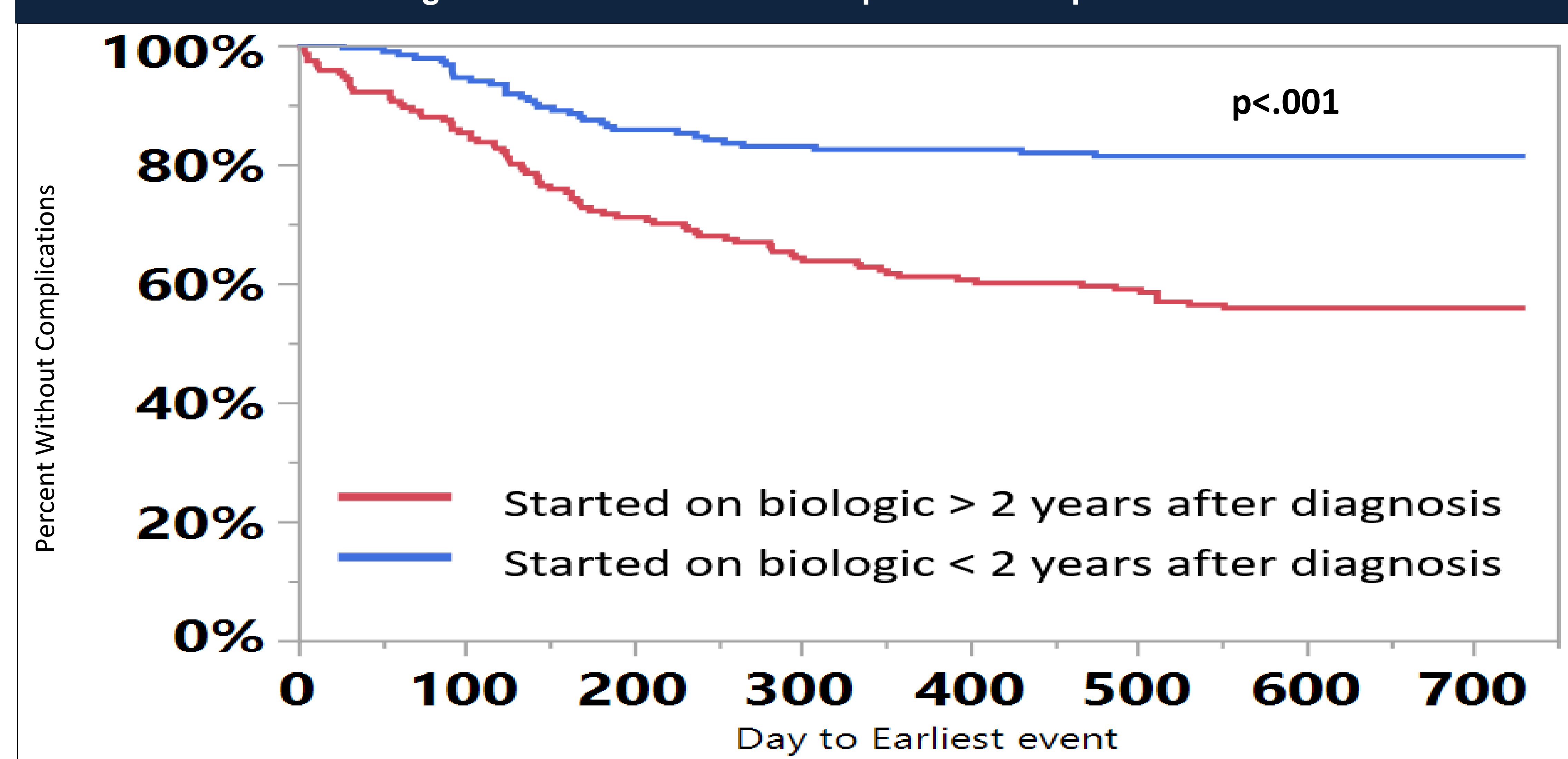


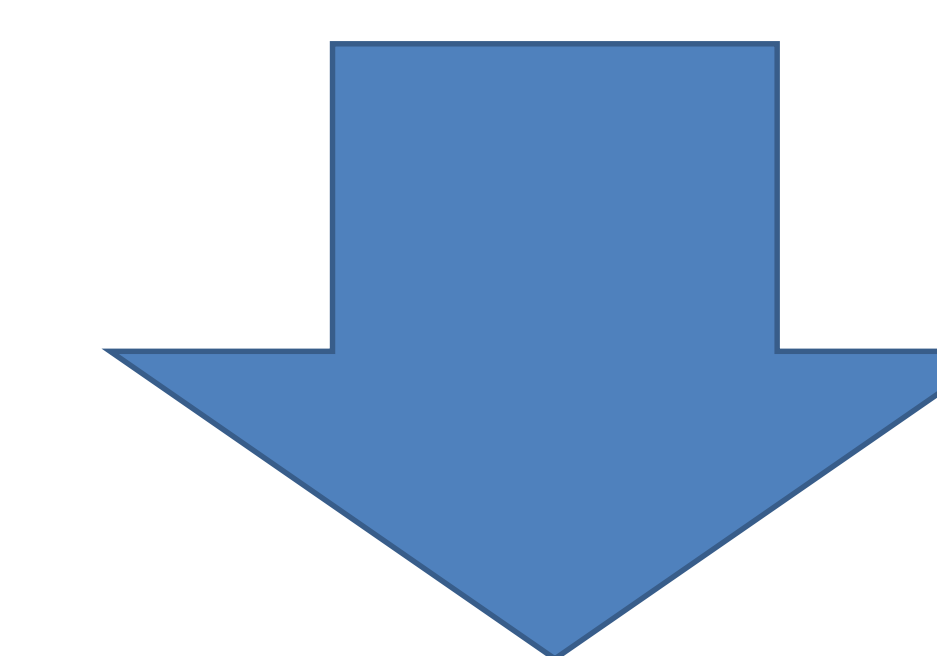
Table 2: Events Compared

	<2 (n, %)	>2 (n, %)	NNT
Number of patients	181	190	
ER visits	35 (19.3%)	84 (44.2%)	4
Hospitalizations	30 (16.6%)	58 (30.5%)	7.2
Surgery	29 (16.0%)	53 (27.9%)	8.4
Steroid prescriptions	12 (6.62%)	15 (7.89%)	79

Discussion

- Earlier initiation of biologics (within 2 years of diagnosis) results in a lower probability of UC-related complications, which includes emergency room visits, steroid use, hospitalizations, and surgeries.
- Number needed to treat (NNT) to prevent 1 UC-related complication is ~3.9.

We hypothesized that early initiation of biologic therapy would lead to fewer UC-related complications and higher response rates.



Initiation of biologic therapy within 2 years of diagnosis of UC is associated with an absolute risk reduction of complications of approximately 26%

Disclaimer

The views expressed herein are those of the authors and do not reflect the official policy or position of Brooke Army Medical Center, the U.S. Army Medical Department, the U.S. Army Office of the Surgeon General, the Department of the Army, the Department of the Air Force, and the Department of Defense or the U.S. Government.

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