

# Frailty Rather Than Age Is Associated With Infections And Surgeries In Inflammatory Bowel Disease

Andrew R. Leopold, MD,<sup>1</sup> Brandon Rodgers, MD,<sup>1</sup> Ahmed Chatila, MD,<sup>1</sup> Uni Wong, MD<sup>1,2</sup>

## BACKGROUND

- Frailty has been associated with infection risk in patients with inflammatory bowel disease (IBD)
- Age is the most commonly considered factor when medical therapy is prescribed

## AIMS

- To determine for patients who are frail and for those aged 60 and over
  - 1) prescribing pattern
  - 2) clinical outcomes

## METHODS

- Retrospective chart review
- Patients that initiated care in our IBD clinic in 2016
- Inclusion criteria
  - age >18, 3 years of at least annual follow-up, patients with IBD, moderate to severe IBD
- Exclusion criteria
  - follow-up for <3 years, removal of diagnosis of IBD, follow up that is not contiguous during the 3-year period
- Data collected included prescribed IBD therapies, frailty status, infections, IBD-related hospitalizations, and IBD related surgeries
- Frailty definition: at least one frailty indicator by Frailty risk score
- Elderly definition: age >60

## TABLES

**Table 1:**

	Age >60 (n=15)	Age < 60 (n=79)	$\chi^2$ and p value	Frail (n=18)	Non-frail (n=76)	$\chi^2$ and p value
<b>Immuno-modulator (n=33)</b>	5 (33%)	28 (33%)	$\chi^2=0.25$ p=0.88	7 (39%)	26 (34%)	$\chi^2=0.14$ p=0.71
<b>Anti-TNF (n=66)</b>	7 (47%)	59 (75%)	$\chi^2=4.73$ p=0.030	10 (56%)	56 (74%)	$\chi^2=2.29$ p=0.13
<b>Other biologics (n=38)</b>	10 (67%)	28 (35%)	$\chi^2=5.10$ p=0.024	8 (44%)	30 (39%)	$\chi^2=0.15$ p=0.70
<b>Total medication changes</b>	1.6 ± 1.0	1.1 ± 1.0	p=0.10	1.8 ± 1.2	1.1 ± 0.94	p=0.007
<b>Total steroid tapers</b>	0.93 ± 0.80	0.85 ± 0.85	p=0.72	1.0 ± 0.87	0.83 ± 0.83	p=0.439
<b>Average number of infections</b>	0.86 ± 1.0	0.97 ± 1.2	p=0.75	2.0 ± 1.5	0.72 ± 0.95	p<0.001
<b>IBD related hospitalizations</b>	0.33 ± 0.82	0.94 ± 1.7	p=0.19	1.4 ± 1.8	0.71 ± 1.6	p=0.11
<b>IBD related surgeries</b>	0.27 ± 0.59	0.29 ± 0.62	p=0.89	0.56 ± 0.98	0.22 ± 0.47	p=0.039

1: University of Maryland School of Medicine, Baltimore, MD, USA

2: VA Maryland Health Care System, Baltimore, MD, USA

## RESULTS

- 88 patients with moderate to severe IBD
- average age 43, 48% female, 61% Crohn's disease, 38% ulcerative colitis, 1% indeterminant colitis
- 14 patients (16%) were elderly, 17 (19%) were frail
- 4 (27%) of the elderly patients were frail
- 13 (18%) of those < 60 years were frail
- Prescribing patterns
  - Younger patients: anti-TNF agents
  - Older: other biologics
- Frail vs non frail: all 3 classes of therapy were prescribed at similar rates independent of frailty
- Outcomes
  - By age: no differences were observed in the number of steroids tapers, infection rate, IBD-related hospitalizations, or IBD-related surgeries
  - Frail patients: more medication changes, more frequent infections, more frequently IBD-related surgeries.
  - Frailty status: no differences were seen in the number of steroid tapers or IBD related hospitalizations

## CONCLUSION

- Medication selection occurs independent of frailty status
- Patients with IBD have no differences in infection rate, IBD related hospitalizations, or surgeries when stratified by age
- Frail patients are more likely to have an infection or an IBD related surgery
- **When considering IBD therapy, age may just be a number**
- **Frailty may be a better indicator of risk of poor outcomes**