Over 25% of Inflammatory Bowel Disease Advanced Therapy Dose Escalations are based on Symptoms Alone: A Quality Improvement Opportunity

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INTRODUCTION

- Dose escalations of advanced inflammatory bowel disease (IBD) therapies are generally made when ***loss of response to standard maintenance dosing is seen*** as evidenced by active, refractory IBD.[1]
- Choosing Wisely Canada (CWC) recommends that long-term therapies for IBD should ***not*** be escalated ***without biochemical or endoscopic evidence of active disease***.[2]
    - Serum levels of monoclonal antibodies and/or anti-drug antibodies can also inform dose escalations.[3,4]
- Escalating advanced IBD therapies can increase costs, potential safety concerns, and long-term use of higher than necessary doses.[5]
- ***The aim of this study was to assess the proportion of advanced IBD therapy changes made between 2021-2025 at the University of Alberta IBD Unit which followed current CWC recommendations.***

METHODS

- Retrospective cohort quality improvement study examining documented indications for advanced IBD therapy dose escalations at the University of Alberta Hospital between 2021 and 2025.
- A database maintained by nurse clinicians at our IBD clinic (authors CMW, KOB, PE) was reviewed to determine IBD type and which advanced therapy was escalated.

Indications	
Included	**Excluded**
• Patient symptoms	• Weight gain alone (Infliximab)
• Abnormal biomarkers (i.e., fecal calprotectin, C-reactive protein)	• Reload after pregnancy or acute illness
• Endoscopic findings	• Scheduling/logistic reasons
• Imaging results	• Change to subcutaneous formulations
• Serum drug and anti-drug antibody levels	• Directed by non-GI physician
	• No reason documented

- Additional review for the context of reported symptoms, including whether they were related to extraintestinal manifestations (EIMs) or occurring during the induction period was also collected.
- Descriptive statistics were calculated for the overall cohort and subgroups for IBD type and each advanced therapy agent.

RESULTS

- 1334 advanced IBD therapy dose escalations were made for 1081 patients.
- ***384 (28.8%) of dose escalations were made for patient-reported symptoms alone:***
    - 9 for EIM-related symptoms.
    - 23 for ongoing symptoms during induction.
    - 49 for symptoms occurring at the end of current dosing interval.
- 701 (52.5%) were made for active disease being identified.
    - The most used modalities for evidence of disease activity use were fecal calprotectin levels (48.4%) and endoscopy (47.4%).
- 249 (18.7%) were made based on serum drug and/or anti-drug antibody levels +/- reported symptoms.
    - Rates of use were highest for anti-TNFs (16.8% – 32.7%).
- ***54 advanced IBD therapy dose de-escalations were made with none of these de-escalations made based on symptoms alone***.

RESULTS

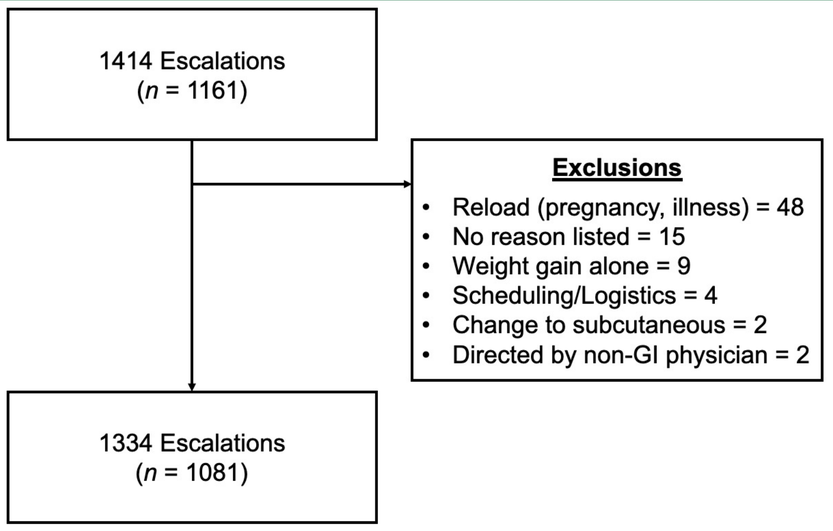

Figure 1. Flowchart of advanced IBD therapy dose escalations selected for inclusion in this study.

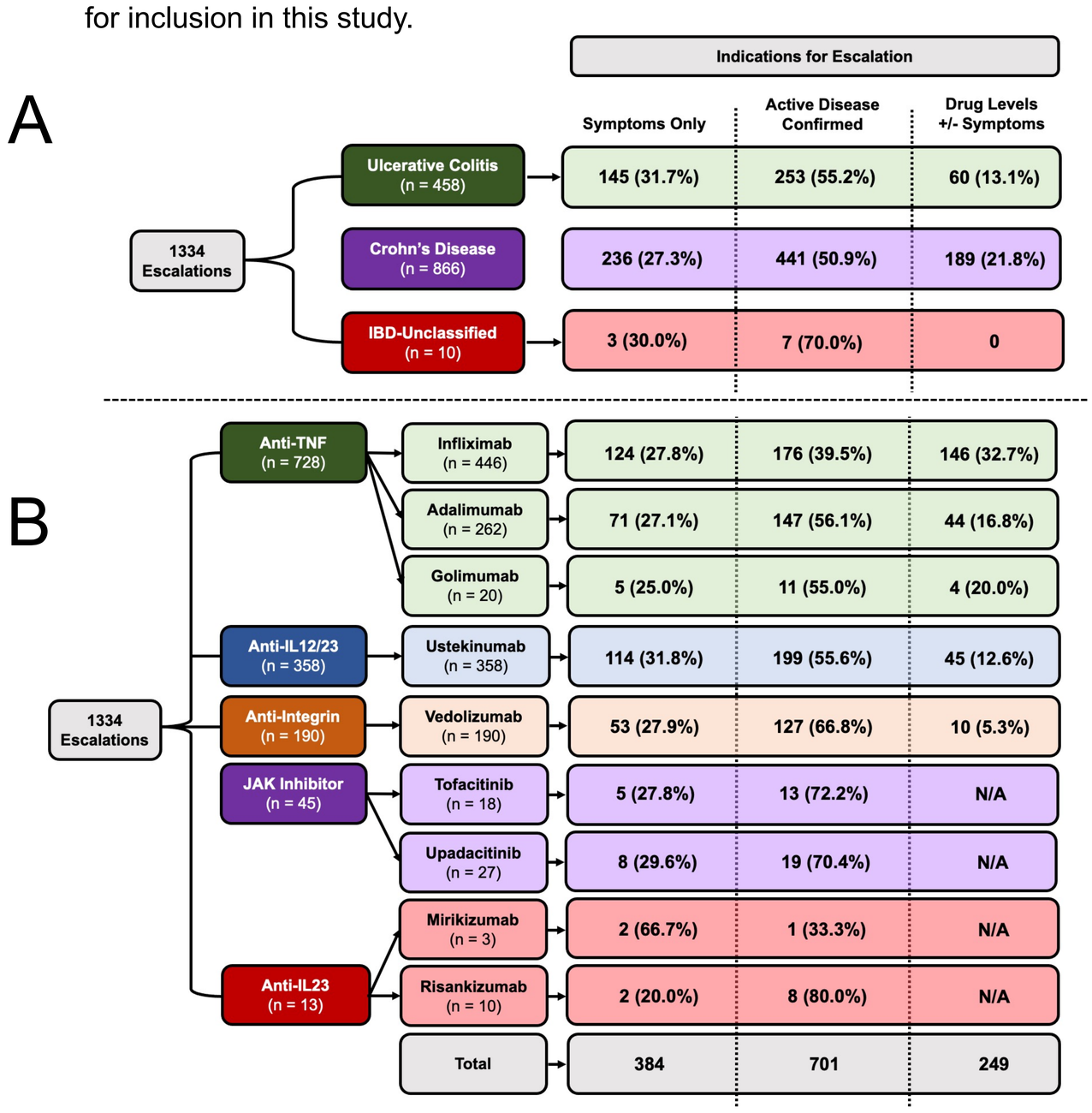

Figure 2. Summary of advanced IBD therapy dose escalations completed at the University of Alberta IBD Unit between 2021 and 2025 by IBD type (A) and advanced therapy type (B) with documented indications for escalation.

DISCUSSION

- In our study, 28.8% of IBD advanced therapy dose escalations were made based on symptoms alone, ***demonstrating the need for ongoing improvement in confirming active IBD prior to escalating doses.***
    - ***Rates of using symptoms alone to inform dose escalations were slightly higher for UC (31.7%) vs Crohn's Disease (27.3%).***
    - This rate was largely preserved between type of IBD and type of advanced IBD therapy.
- Including advice regarding serum drug and anti-drug antibody levels could reduce the discordance our study found between clinical practice and the current CWC recommendation for IBD dose escalations.
- ***Future directions from this study include assessing clinical outcomes for patients who were dose escalated based on symptoms alone.***

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