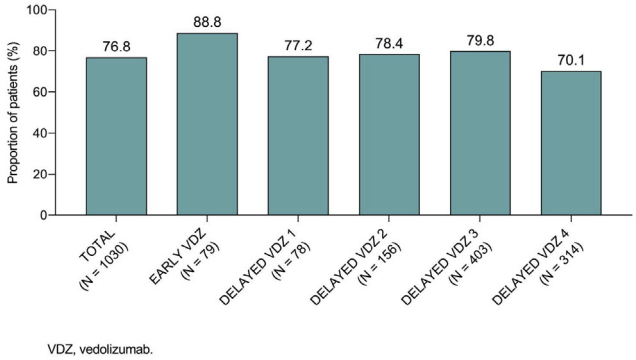
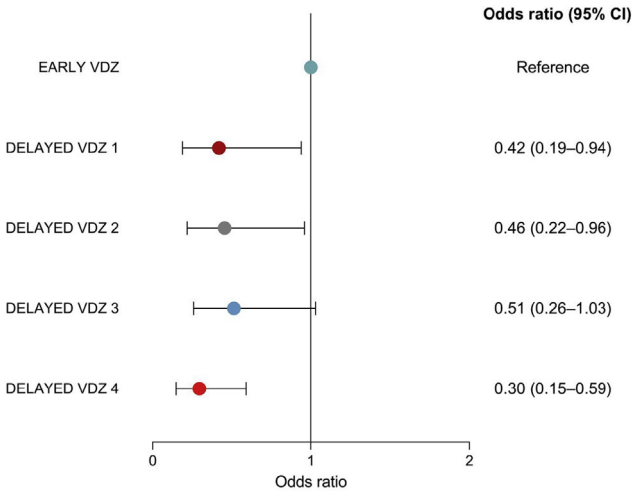
diagnosed UC are often prescribed conventional therapies, such as immunomodulators (IM), corticosteroids (CS), and/or 5-aminosalicylates (5-ASA) before biologic treatment, which may result in suboptimal clinical outcomes and high costs. RALEE is an observational study investigating the impact of early versus delayed initiation of vedolizumab (VDZ) on clinical and economic outcomes in patients with inflammatory bowel disease, using administrative data sets. Here, we report the impact on treatment response in patients with UC. **METHODS:** Using the MarketScan Commercial Claims and Encounters database and the MarketScan Medicare Supplemental database, we identified adult patients diagnosed with UC between 2017 and 2018 who had $\geq$ 1 claim for VDZ and continuous enrollment for $\geq$ 12 months before and after their initial UC diagnosis. Patients were excluded if they received VDZ, anti-tumor necrosis factor therapy, or other biologic therapy in the 12 months before their initial UC diagnosis. Five post-diagnosis treatment pathways were predefined: (1) **EARLY VDZ**, VDZ within 30 days of initial UC diagnosis; (2) **DELAYED VDZ 1**, IM (not 5-ASA) before VDZ; (3) **DELAYED VDZ 2**, CS with IM before VDZ; (4) **DELAYED VDZ 3**, 5-ASA with CS before VDZ; or (5) **DELAYED VDZ 4**, 5-ASA with CS and IM before VDZ. Response was defined as no occurrence of the following events within 60 days after VDZ initiation: new concomitant use of CS, inflammatory bowel disease-related surgery, increased administration of VDZ, VDZ treatment discontinuation, or treatment switch. Response was evaluated with logistic regression (backwards selection) with **EARLY VDZ** as the reference group. **RESULTS:** We identified 136,315 patients with UC, of whom 1,342 received VDZ and met the selection criteria. The median age of patients was 43 years; 51.0% of patients were male and 96.4% were commercially insured. The proportion of patients with response to VDZ was higher for **EARLY VDZ** (88.8%) than any of the **DELAYED VDZ** treatment pathways (70.1–79.8%) (Figure 1). Delayed initiation of VDZ (**DELAYED VDZ 1, 2, and 4**) was associated with a significantly lower likelihood of response than **EARLY VDZ** (Figure 2). **CONCLUSION:** This analysis demonstrates that patients with UC are more likely to respond to therapy if initiated on VDZ within 30 days of diagnosis than if initiation is delayed by use of IM, CS, and/or 5-ASA. These findings are consistent with clinical guidelines that recommend use of VDZ for induction of remission in patients with moderately to severely active UC. Further analyses of remission, healthcare resource utilization, and associated direct medical costs are underway.



VDZ, vedolizumab.

Figure 1. Proportion of Patients With Response to VDZ by Treatment Pathway



CI, confidence interval; VDZ, vedolizumab.

Figure 2. Likelihood of Response to VDZ by Treatment Pathway

EFFICACY OF LOW DOSE NALTREXONE IN PATIENTS WITH CROHN'S COLITIS AND ILEITIS

Leonard Weinstock

In a Phase 2 placebo-controlled trial, low dose naltrexone (LDN) improved inflammation of the gastrointestinal mucosa and improved clinical activity scores in patients with mild to moderate Crohn's disease (CD). We present two patients with symptomatic CD with a rapid clinical and endoscopic response to LDN: 1) Crohn's colitis with prolonged maintenance to LDN which had failed mesalamine with immunomodulator therapy; and 2) Crohn's ileitis with prolonged remission with addition of LDN to biologic and immunomodulator therapy.

CASE 1: A 43-year-old male with a 23-year history of Crohn's colitis of mild-to-moderate severity was previously treated with 150 mg mercaptopurine and mesalamine. Despite this treatment he had left-sided abdominal cramping, urgency, and 8-12 loose bowel movements with bleeding. Colonoscopy showed severe rectal ulcerations and normal ileum (Figure 1A). He started 1 mg oral naltrexone daily which was increased to 4 mg daily over 1 mo and a tapering course of budesonide. Mesalamine was continued. Six mo later, he stated he had 2 to 3 semi-formed bowel movements daily without bleeding or urgency. He was maintained on mesalamine and LDN 4.5 mg daily for 3 years. Colonoscopy showed dramatic improvement of rectal ulcerations and 3 small erosions in the proximal ascending colon which were not present on the previous colonoscopy (Figure 1B).

At the time of this colonoscopy he was doing well clinically with a plan to augment LDN therapy with a probiotic and an anti-inflammatory diet. This case demonstrates favorable clinical and endoscopic response to an LDN-based regimen that was rapid and durable, with a short exposure to steroid. **CASE 2:** A 42-year-old female with a history of severe CD of the colon and ileum starting at age 27. She

required total colectomy and end ileostomy at age 36. Three years after surgery she developed recurrent ileal ulcerations and strictures leading to further ileal resection. Later that year, ileoscopy demonstrated ileal ulcers (Figure 2A) and she was started on infliximab and mercaptopurine. She was stable for 3 years but then developed higher ileostomy output and fatigue. Methotrexate was substituted for mercaptopurine which helped reduce symptoms for 2 years. With increasing ostomy output, infliximab dosing interval was reduced from 8 weeks to 5 weeks which led to less output and less fatigue. After a year, symptoms returned, and naltrexone was added with 1 mg increasing to 4.5 mg over 1 month. Within 4 months, her symptoms were in remission and ileoscopy showed flat scars where ulcers had been seen in the past (Figure 2B). Her disease remained in endoscopic remission for 3 years documented by two more ileoscopies. The patient maintained clinical response to the combination of infliximab (6 week intervals), methotrexate, and LDN. Owing to a change in insurance she was lost to follow up at this point.

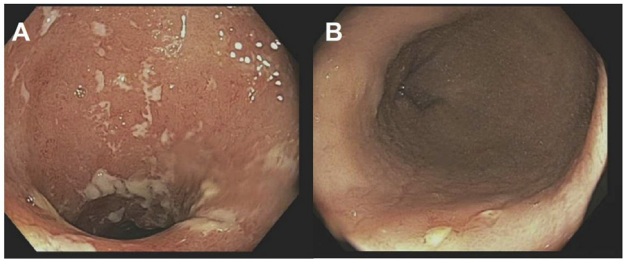


Figure 1. Rectal images before starting LDN for CD (A) and 3 years of maintenance therapy with LDN (B)

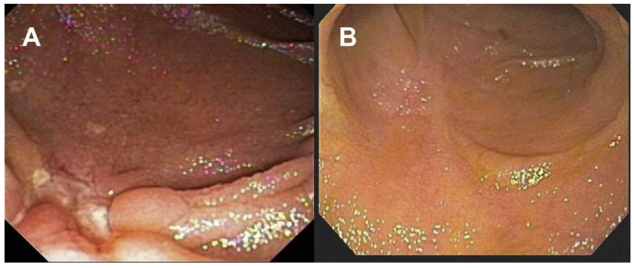


Figure 2. Ileal ulcers seen after the second surgery (A) and scar tissue seen at the ulcer sites at the time the patient with on infliximab, methotrexate, and LDN (B)

HIGH DOSE TOFACITINIB AS SALVAGE THERAPY IN STEROID REFRACTORY ACUTE SEVERE ULCERATIVE COLITIS FOLLOWING NON-RESPONSE TO INFLIXIMAB

Muhammad Khan, Kamran Mushtaq, Rafie Yakoob, Deema AlSoub

INTRODUCTION: Acute Severe Ulcerative Colitis (ASUC) requiring hospitalization remains a serious concern in patients with Ulcerative colitis. In patients with steroid-refractory disease, Intravenous infliximab salvage therapy is used. Colectomy is reserved for patients refractory, even to salvage therapy. We present a young female with ASUC, who was successfully treated with high dose Tofacitinib after Steroids and Infliximab failure. **CASE HISTORY:** A 23 years old female was diagnosed with pan-UC six months prior to the first presentation at our center. Since then, she has had a Steroid dependent disease. She was on the maximum 5-Aminosalicylic dose and could not tolerate azathioprine in the past. At the presentation, she had iron deficiency anemia (10.1 gm/dL), hypoalbuminemia (27 gm/L), C-reactive protein

4 mg/L and calprotectin of 670 mg/Kg. The colonoscopy showed pan-colitis Mayo score 3. Given her steroid dependency for the last six months, she was started on Infliximab induction followed by maintenance. After the second Induction dose of Infliximab, the patient was admitted with worsening of her clinical symptoms. Sigmoidoscopy was performed for the patient, which showed severe colitis. Biopsy showed cytomegalovirus inclusion by immunohistochemistry. The third dose of Infliximab was postponed, and the patient received IV ganciclovir followed by oral therapy for two weeks duration. She responded clinically but before her third dose again had worsening of the disease. At the time of admission, she had a hemoglobin of 7.1 gm/dL, albumin 21 gm/L, CRP 72 mg/L, and calprotectin of 1352 mg/Kg. She met Truelove and Witts criteria for ASUC with a Mayo score of 12. Sigmoidoscopy again showed pan-colitis but was negative for cytomegalovirus. The patient did not respond to 60 mg methylprednisolone daily for five days. She was re-inducted with High dose infliximab and was given two doses 10 mg/Kg one week apart. However, the Mayo score showed no improvement, and surgery was consulted for possible colectomy. After discussing with the patient, we started her on a high dose Tofacitinib of 10 mg three times a day as salvage therapy. She showed dramatic improvement within the next 72 hours, and by day five, was discharged home. Her hemoglobin improved, CRP normalized. At three months, calprotectin was less than 100 mg/Kg, and colonoscopy showed mucosal healing with a Mayo score of 1. **DISCUSSION:** In Steroid refractory ASUC, with non-response to Infliximab, High-dose tofacitinib can be used as rescue therapy. Our patient showed clinical and biochemical remission within three days. At three months follow up, the patient remained colectomy-free and was in sustained remission.

IMPACT OF THIOPURINE DOSE IN COMBINATION THERAPY IN INFLAMMATORY BOWEL DISEASE

Ahmad Nawaz, Laura Glick, Darrick Li, Jill Gaidos, Deborah Proctor, Badr Al-Bawardy

BACKGROUND: Multiple studies have suggested that combination therapy with thiopurines and anti-TNFs is superior to monotherapy in Crohn's disease (CD) and ulcerative colitis (UC). The optimal dose of thiopurines in combination therapy remains unclear. Our aim was to determine the impact of thiopurine dosing in combination therapy on the formation of anti-TNF antibodies and clinical outcomes in inflammatory bowel disease (IBD). **METHODS:** This is a single-center, retrospective cohort study of all IBD patients treated with thiopurine and anti-TNF combination therapy between 1/1/2012 and 11/1/2020. Therapeutic dose of thiopurines was defined as $\geq$ 1 mg/kg for 6-mercaptopurine (6-MP) and $\geq$ 2 mg/kg for azathioprine (AZA). The primary outcome