



## Introduction

- Myocarditis is a rare extraintestinal cardiac manifestation of IBD
- It is more commonly reported in Ulcerative Colitis than in Crohn's disease (CD) and consequently not frequently reported.
- The prevalence of myocarditis in CD patients on immunosuppressive and immunomodulatory therapy is not well known.

## Aim

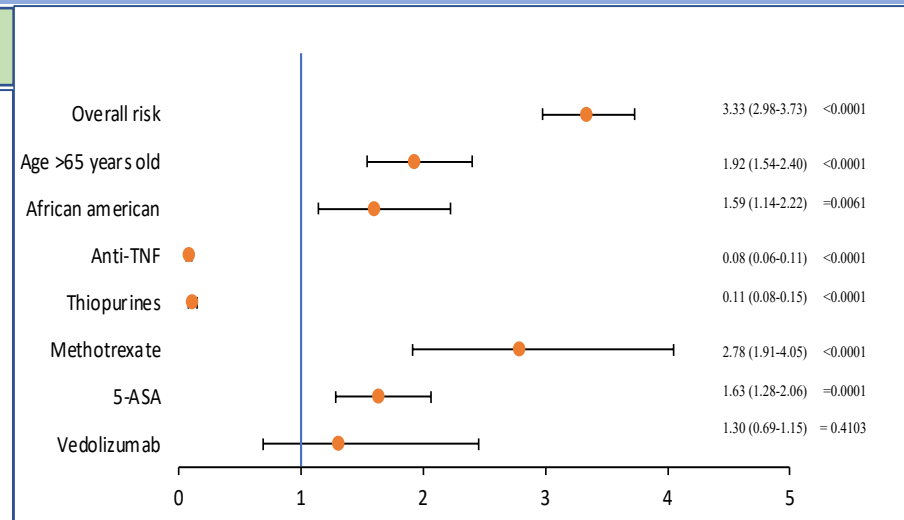
- Our study aims to assess the prevalence of myocarditis and the effect of immune-modifying therapy in CD.

## Methods

- Explorys Database
- Retrospective cohort 1999-2022
- Patients >18 years old
- Investigated the prevalence of myocarditis in CD patients.
- Compared the prevalence between CD patients with and without immune-modifying agents.

## Results

Of the 70, 301,380 individuals in the database from 1999 to present, we identified 249,300 (0.3%) patients with CD, of whom 40,840 (16.4%) patients received anti-TNFs. CD patients were 59.4% females, 76% Caucasian, and 70% in 18-65 years age group. The prevalence of myocarditis was 0.12% for CD compared to 0.04% in individuals without IBD,  $p < 0.001$ . Compared to the general population, patients with CD had higher association risk of myocarditis diagnosis [OR: 3.33,  $p < 0.0001$ ]. Among CD, predictors of having myocarditis included being elderly (>65 y/o), African American, smokers and has history of type 2 diabetes ( $P < 0.0001$ ). The prevalence of myocarditis was significantly lower CD patients on anti-TNF agents [OR: 0.08,  $p < 0.0001$ ], and thiopurines [OR: 0.11,  $p < 0.0001$ ] whereas methotrexate and 5-aminosalicylates (5-ASA) had higher rates [OR: 2.78,  $p < 0.0001$ ] and [OR: 1.63,  $p = 0.0001$ ], respectively. No significant effect was noted with Vedolizumab [OR: 1.30,  $P = 0.4103$ ] (figure 1).



## Discussion

We found a higher risk association between CD and myocarditis. Anti-TNF agents and thiopurines were less likely to be associated with myocarditis, while methotrexate and 5-ASA were more likely to be associated with myocarditis in CD. The difference in the association between immune-modifying agents is unclear. Hence, further prospective studies are required to evaluate this association. Our findings may have significant implications for patients with cardiac risk factors and underlying myocardial dysfunction.