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RISK OF SEVERE COVID-19 OUTCOMES ASSOCIATED WITH INFLAMMATORY BOWEL DISEASE MEDICATIONS: REASSURING INSIGHTS FROM PREPARE-IBD

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Introduction This study sought to identify patient or IBD medication-related factors associated with severe outcomes from COVID-19.

Methods PREPARE-IBD was a multi-centre observational United Kingdom (UK) cohort study including adult IBD patients (≥ 18 yrs) diagnosed with COVID-19 by PCR between 1/3/2020 and 31/8/2020. The primary outcome was severe COVID-19 defined as requirement for intensive care admission, invasive ventilation or death. We tested associations of

severe outcomes with medications and other covariates using multiple logistic regression.

Results 211 patients were included from 60 UK centres. 56 of 211 patients (26.5%) met the primary outcome. Severe COVID-19 was more common in ulcerative colitis relative to Crohn's disease patients (33.9% [37/109] vs. 18.6% [16/86], $p=0.018$). Shortness of breath, nausea and vomiting were more common with severe COVID-19 ($p<0.001$ and $p=0.023$ respectively). Multivariable analysis (Figure panel A) identified co-morbidities and age as associated with severe COVID-19 outcomes; odds ratio (OR [95% CI]) 1.68 (1.23-2.35) for each co-morbidity, and an OR 1.03 (1.00-1.05) with each successive year of age. Neither clinically active IBD, non-white ethnicity, nor prednisolone use were associated with increased risk (Figure panel B). On multivariable analysis, mesalazine was associated with severe COVID-19 outcomes (OR 2.03 [1.01-4.12]). Univariable analysis identified biologics and thiopurines as protective (OR 0.38 [0.15-0.87] and 0.32 [0.092-0.86] respectively). On multivariable analysis no association of severe COVID-19 outcomes with thiopurine or biologic exposure was seen.

Conclusions Our data provide reassurance for the continued evidence-based use of corticosteroids, immunomodulators and biologic therapies in IBD during the ongoing COVID-19 pandemic, and is consistent with an as yet unexplained association between mesalazine use and severe COVID-19 outcomes.

Abstract ATU-3 Figure 1