Supplementary Table 1: Detailed search strategy for the systematic review

Search Strategy (Date: 29 July 2020)

Pubmed	((Inflammatory Bowel Disease OR Ulcerative colitis OR Crohn Disease OR Crohn's disease)) AND (Coronavirus OR COVID-19 OR SARS-COV-2 OR nCOV)	194
Embase	(**'coronaviridae infection'**/exp OR **'coronaviridae infection'** OR **'coronavirus disease 2019'**/exp OR **'coronavirus disease 2019'** OR **'sars-related coronavirus'**/exp OR **'sars-related coronavirus'**) AND (**'inflammatory bowel disease'**/exp OR **'inflammatory bowel disease'** OR **'crohn disease'**/exp OR **'crohn disease'** OR **'ulcerative colitis'**/exp OR **'ulcerative colitis'** OR (**ulcerative** AND (**'colitis'**/exp OR **colitis**)))	196

Supplementary Table 2: Excluded studies with reasons of exclusion

Reference	**Setting**	**Reason for exclusion**
Allocca M	Single centre- Italy	No relevant data
Brenner EJ	Multi-centre Multiple countries	Patients included in SECURE IBD
Bai X	Single centre- China Questionnaire	No relevant data
Clough JN	Single centre- UK Survey	No relevant data
D' Amico F	Multi centre- Italy, France, Belgium Survey	No relevant data
D' Amico F	Multi centre- Italy, France Survey	No relevant data
Chen Y	Single Centre- China Survey	No relevant data

Khan N	Single Centre- USA	No relevant data
Chen J	Single centre- China Questionnaire	No relevant data
Lees CW	Multi centre- Multiple countries Survey	No relevant data
Azzam NA	Single centre- Saudi Arabia Questionnaire	No relevant data

References for Supplementary Table

1. Allocca M, Fiorino G, Furfaro F, et al. Maintaining the Quality Standards of Care for Inflammatory Bowel Disease Patients During the COVID-19 Pandemic. *Clin Gastroenterol Hepatol*. 2020;18(8):1882-1883.
2. Brenner EJ, Ungaro RC, Gearry RB, et al. Corticosteroids, But Not TNF Antagonists, Are Associated With Adverse COVID-19 Outcomes in Patients With Inflammatory Bowel Diseases: Results From an International Registry. *Gastroenterology*. 2020;S0016-5085(20)30655-7\
3. Bai X, Yang H, Qian J. COVID-19 outbreak and inflammatory bowel disease management: a questionnaire survey from realistic practice. *J Crohns Colitis*. 2020;jjaa064. doi:10.1093/ecco-jcc/jjaa064
4. Clough JN, Hill KL, Duff A, et al. Managing an IBD Infusion Unit During the COVID-19 Pandemic: Service Modifications and the Patient Perspective. *Inflamm Bowel Dis*. 2020;izaa171. doi:10.1093/ibd/izaa171
5. D'Amico F, Rahier JF, Leone S, Peyrin-Biroulet L, Danese S. Views of patients with inflammatory bowel disease on the COVID-19 pandemic: a global survey. *Lancet Gastroenterol Hepatol*. 2020;5(7):631-632.
6. D'Amico F, Danese S, Peyrin-Biroulet L; ECCO COVID taskforce. Inflammatory Bowel Disease Management During the Coronavirus-19 Outbreak: A Survey From the European Crohn's and Colitis Organization. *Gastroenterology*. 2020;159(1):14-19.e3.
7. Chen Y, Hu S, Wu H, et al. Patterns of care for inflammatory bowel disease in China during the COVID-19 pandemic. *Lancet Gastroenterol Hepatol*. 2020;5(7):632-634.

8. Khan N, Patel D, Xie D, Pernes T, Lewis J, Yang YX. Adherence of infusible biologics during the time of COVID-19 among patients with Inflammatory Bowel Disease: A nationwide VA cohort study. *Gastroenterology*. 2020;S0016-5085(20)34845-9. doi:10.1053/j.gastro.2020.06.044
9. Chen J, Peng X, Zhang M, Zhi M. Impact of medication discontinuation on patients with inflammatory bowel disease during the COVID-19 outbreak. *Gastroenterology*. 2020;S0016-5085(20)34779-X. doi:10.1053/j.gastro.2020.05.087
10. Lees CW, Regueiro M, Mahadevan U; International Organization for the Study of Inflammatory Bowel Disease. Innovation in IBD Care During the COVID-19 Pandemic: Results of a Global Telemedicine Survey by the International Organization for the Study of Inflammatory Bowel Disease. *Gastroenterology*. 2020;S0016-5085(20)34735-1. doi:10.1053/j.gastro.2020.05.063
11. Azzam NA, Aljebreen A, Almuhareb A, Almadi MA. Disability and quality of life before and during the COVID-19 outbreak: A cross-sectional study in inflammatory bowel disease patients. *Saudi J Gastroenterol*. 2020;10.4103/sjg.SJG_175_20. doi:10.4103/sjg.SJG_175_20

Supplementary Table 3: Studies depicting the impact of age on risk of COVID infection in IBD

Study and Author		Patients of IBD without COVID-19 infection	Patients of IBD with COVID-19 infection	Comment
Taxonera C et al		1906	12	• Crude incidence rate of COVID-19: 6.2/1000 patients of IBD • Age-adjusted Incidence rate of COVID-19: 4.9/1000
Lukin DJ et al	<40 years	41 (45.6%)	10 (34.5%)	• COVID-19 infected IBD patients had higher age compared to non-COVID, though statistically non-significant
	>40 years	49 (54.4%)	19 (65.5%)	
Gubatan J et al		163	5	• COVID-19 infected IBD patients had higher age compared to non-COVID (mean age, 70.6 vs. 47.0 years), p value <0.001 • On multivariate analysis, age >66 years was associated with increased risk of COVID-19
Mosli M et al	<16 years	23 (2.0%)	0	
	17-40 years	977 (84.6%)	3 (50%)	
	>40 years	155 (13.4%)	3 (50%)	
Khan N et al		37821	36	• COVID-19 infected IBD patients had similar age (Mean age, 60.9 years vs 63.0 years)

Supplementary Table 4: Risk of Bias estimation using Joanna Briggs Institute checklist for the incidence data for the studies reporting risk of COVID-19 infection (Green color represents “Yes” to the checklist question, red color represents “No” and yellow color represents “unclear”)

Checklist	Taxonera C	Hormati A	Lukin DJ	Khan N	Mosli M	Scaldaferri F	Allocca M	Grunert PC	Marafini I
Were the included patients representative to the target population?	YES	Only patients on Azathioprine/biologicals included	Included only active IBD cases	YES	YES	Included patients on biologics only	YES	YES	YES
Were IBD patients recruited adequately in the study?	Not mentioned		YES	YES	YES		YES	YES	YES
Was the sample size (IBD patients) used for analysis adequate?	YES		YES	YES	YES	Included patients on biologics only	YES	YES	YES
Study subjects (IBD patients) and setting described in detail?	YES	YES	YES	YES	YES		YES	YES	YES
Was data analysis conducted with sufficient coverage of the identified sample?	YES	YES	YES	Among the included cases whether all were positive or also included clinically suspected cases for analysis is not clear	YES	Data on a subset of patients not present	YES	YES	YES
Was valid method used to identify the COVID in IBD?	YES	YES	YES	YES	YES	YES	YES	Method of testing and how many patients tested is not mentioned	YES
Was the COVID infection measured in a standard, reliable way for all the participants?	YES	YES	YES	All patients were not tested and basis of those tested is not clear			YES		
Was adequate statistical analysis used?	YES	Incidence of COVID not adjusted for Age and comorbidities							YES
Was the response rate adequate?	YES	YES	YES	YES	YES	YES	YES	YES	YES

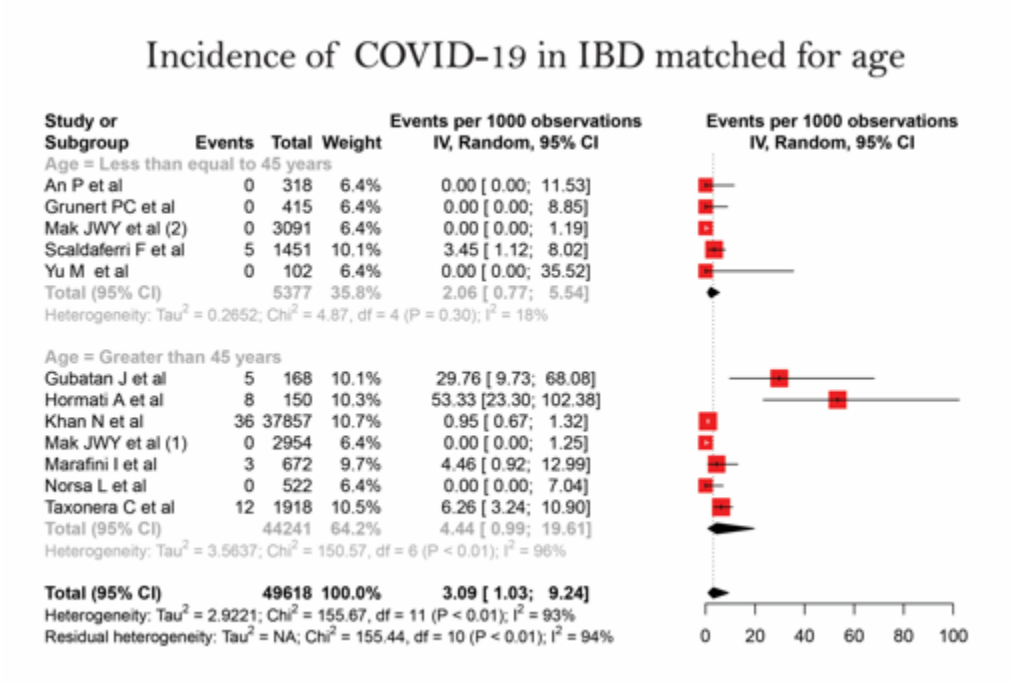
Cont….

Checklist	Yu M	An P	Singh S	Gubatan J	Norsa L	Mak JWY	Foteinogiannopoulou	Grassia
Were the included patients representative to the target population?	YES	YES	YES	YES	YES	YES	YES	YES
Were IBD patients recruited adequately in the study?	YES	YES	How the IBD patients selected for testing is not clear, whether only symptomatic patients tested or patients tested randomly irrespective of symptoms	YES	YES	YES	YES	YES
Was the sample size (IBD patients) used for analysis was adequate?	YES	YES	Sample size calculation not mentioned		YES	Sample size calculation and how many tested not mentioned		YES
Study subjects (IBD patients) and setting described in detail?	YES	YES	Disease activity not mentioned	YES	YES	YES	Details of IBD patients not given	
Was data analysis conducted with sufficient coverage of the identified sample?	YES	YES	YES	YES	YES	YES	YES	YES
Was valid method used to identify the COVID in IBD?	The method of testing the COVID infection is not mentioned		YES	YES	Method of testing not mentioned	YES	Method of testing not mentioned	
Was the COVID infection measured in a standard, reliable way for all the participants?			YES	YES		YES		
Was adequate statistical analysis used?	Incidence of COVID not adjusted for Age and comorbidities							
Was the response rate adequate?	YES	YES	YES	YES	YES	YES	YES	YES

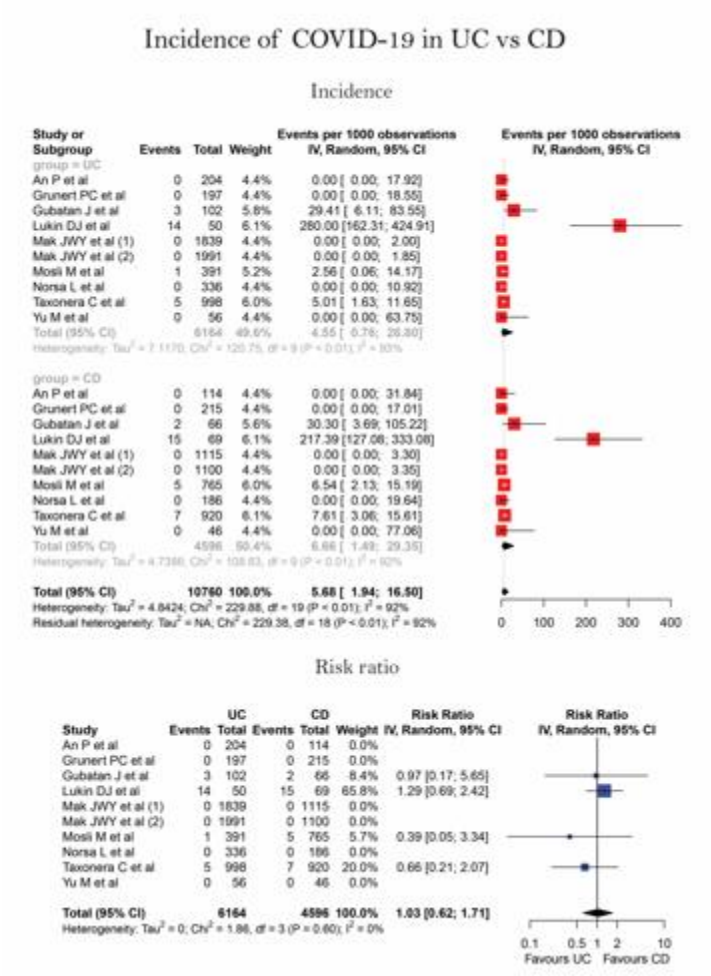
Supplementary Table 5: Risk of Bias estimation using Joanna Briggs Institute checklist for case series for the studies reporting outcomes in patients with COVID-IBD (Green color represents “Yes” to the checklist question, red color represents “No” and yellow color represents “unclear”)

	Taxonera C	Lukin DJ	Rodriguez-Lago I	Haberman R	Axelrad JE	Scaldaferri F	Allocca M	Marafin I	Bezzio C	Singh S	Gubatan J	Gonzalez HA	SECURE IBD
Were inclusion criteria for study participants was clear?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Was the outcome (mortality) measured in a standardised and reliable way?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Valid method of outcome for all the participants	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Were the patients in the study included in consecutive way?	YES	Case control study with no clear mention whether all consecutive patients included		Selective patients of immune mediated disease and COVID with no mention whether all consecutive patients included	Not mentioned whether all patients of COVID IBD included	YES	YES	YES	YES	YES	YES	YES	International registry included physician reported cases only
Does the study include all the patients of COVID IBD?	YES		YES			YES	YES	YES	YES	YES	YES	YES	
Do the demography of the participants described?	YES	YES	YES	YES	YES	Demography and clinical status of COVID positive IBD patients not mentioned	YES	Clinical details of COVID positive IBD patients not mentioned	YES	YES	YES	YES	YES
Do the clinical status of COVID IBD patients described clearly?	YES	Disease activity not mentioned for IBD	YES	Disease activity and comorbidities not separately mentioned for IBD	YES		YES		YES	Disease activity of IBD patients mentioned	YES	YES	YES
Mortality or follow up results clearly reported in the study	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Reporting of geographic and demographic data done?	YES	YES	YES	YES	YES	Not mentioned	YES	Not mentioned	YES	YES	YES	YES	YES
Was the statistical analysis appropriate?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

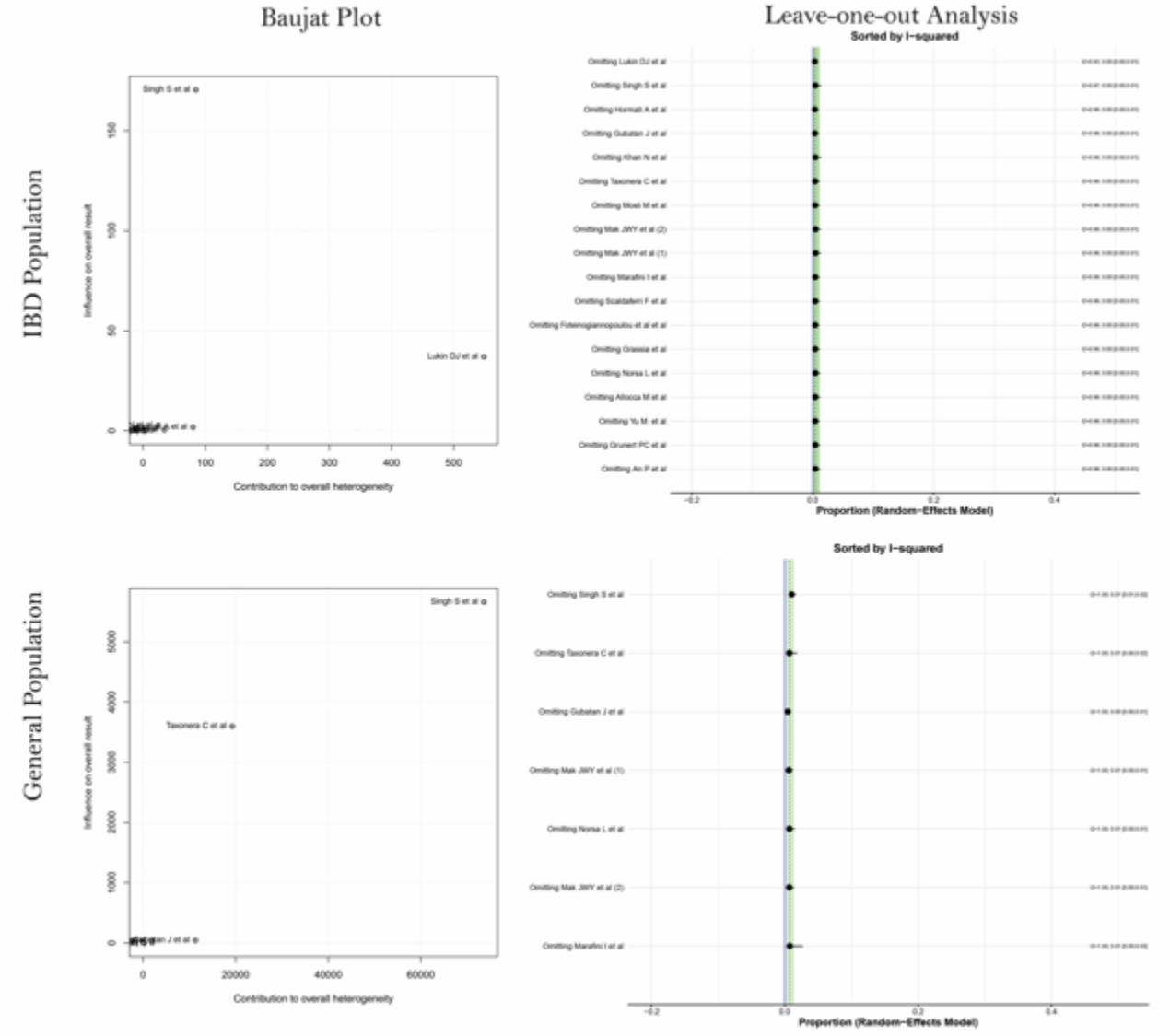
Supplementary Figure 1: Pooled incidence of COVID infection in patients with IBD for studies having a mean age of < 45 years and those with mean age > 45 years



Supplementary Figure 2: Pooled incidence of COVID infection in UC and CD and relative risk of COVID in UC vs CD. The pooled summary was computed by random effect approach. Abbreviation: CD - Crohn's disease; CI - confidence interval; UC - Ulcerative colitis.



Supplementary Figure 3: Assessment of heterogeneity for risk of COVID infection in IBD and general population using Baujat plot and Leave one out analysis



Supplementary Figure 4: Assessment of heterogeneity for outcomes of COVID infection in IBD using Baujat plot and Leave one out analysis