

IOIBD COVID-19 RESEARCH TASKFORCE

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Topic	Short Term	Medium/Long Term
Epidemiology	<ul style="list-style-type: none"> • Susceptibility to COVID-19 in IBD. Effect of: <ol style="list-style-type: none"> a. IBD medications (anti-cytokines, anti-integrins, b. Environmental factors (e.g. smoking, obesity) c. Sub-phenotypes including UC vs CD (ostomies, fistula) d. Co-morbidities and age (including very young) e. Drug delivery; infusion vs injectable f. Pre-infection lymphopenia g. Ethnicity h. Pregnancy • Do IBD patients with COVID-19 have other infections (e.g. C. diff) simultaneously? • What are the symptoms/presentation of COVID-19 in IBD in comparison to non-IBD and disease controls (other immune mediated diseases)? • Effect of childhood BCG vaccination on incidence of COVID in IBD patients? • Can we model COVID related outcomes for patients with IBD who are immunocompromised 	<ul style="list-style-type: none"> • What is the true denominator of SARS-CoV2 infection in IBD by region (country, state, city)? • Effect of medication on SARS-CoV2 seroconversion? • Effect of genetic variation on SARS-CoV2 susceptibility? • Influence of vitamin D status on SARS-CoV2 susceptibility? • Does IgG serology confirm immunity on patients with IBD who are immunocompromised? • Will serological positive patients with IBD sustain immunity – i.e. negativity rate of IgG antibodies. • Should patients with IBD who are immunocompromised be shielded at home throughout the duration of the pandemic (i.e. until vaccine is available or population-level immunity)? • Will immunocompromised patients with IBD strictly follow shielding guidelines over the course of a pandemic that may last years?
Etiology	<ul style="list-style-type: none"> • Is there evidence of fecal-oral route of transmission of SARS-CoV2 in IBD? • What does raised fecal calprotectin in non-IBD COVID-19 mean? 	<ul style="list-style-type: none"> • Can we detect intact SARS-CoV2 virus in the epithelium of the GI tract? If yes – what does this mean? • Does COVID-19 trigger new onset IBD and flares in existing cases?

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Prognosis and natural history	<ul style="list-style-type: none"> • Natural history of COVID-19 in IBD. Influence of: <ul style="list-style-type: none"> ○ IBD medications ○ Smoking ○ Sub-phenotypes including UC vs CD (ostomies, fistula) ○ Co-morbidities and age (including very young) ○ Pre-infection and peri-infection lymphopenia ○ Ethnicity • Influence of medications upon duration of GI and respiratory viremia • <u>Natural history of primary 'GI' COVID-19 in IBD in comparison to 'respiratory' COVID-19</u> • 	<ul style="list-style-type: none"> • What is the impact of immunosuppression and IBD medications on seroconversion (serologic profiles)? • Does COVID-19 positive vs COVID-19 negative status influence IBD prognosis? • Is there an effect of genetic variation and microbiome on the natural History of COVID-19 infection in IBD. • Do IBD-associated factors (inflammation, medications (including high-dose steroids) influence the amount and duration of fecal viral shedding? • <u>What are the downstream effects of delayed care on relapse rates, dysplasia, surgery etc.?</u>
Prevention	<ul style="list-style-type: none"> • <u>Are there improved outcomes in IBD patients that received vaccination (e.g. influenza, pneumococcal)?</u> 	<ul style="list-style-type: none"> • Are response rates to SARS-CoV2 vaccine influenced by <ol style="list-style-type: none"> a. The effect of immunosuppression b. Genetic variation
Outcomes & quality of life	<ul style="list-style-type: none"> • What is the effect of COVID-19 on the Health-related Quality of life of IBD patients? 	
Clinical Practice	<ul style="list-style-type: none"> • How has clinical practice changed during the COVID-19 pandemic (telemedicine, endoscopy, infusions)? 	<ul style="list-style-type: none"> • What will be the impact of the changes to clinical practice: <ul style="list-style-type: none"> ○ On doctor-patient relationship/patient satisfaction? ○ On disease activity and natural history? ○ In cost effectiveness? Are we utilizing less or alternative resources for similar disease outcomes?

ADDITIONAL SUGGESTIONS FROM IOIBD – THANK YOU!

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- Carriage of virus in gut epithelium / stool and impact on endoscopy processing stool samples etc. What about the risk of infection of colonoscopy?
- Re-initiating IBD treatment in IBD patients resolving COVID-19
- What explains the very low incidence of COVID-19 in children? Is it subclinical infection or do they not acquire SARS-COV2? Could assessment of stool and NP cultures for SARS-COV2 (and serology) of children help answer this?
- Is nontoxic U-V lighting in endoscopy and other procedure suites something to think about?
- When to restart medications following COVID-19
- Are patients receiving immunosuppressant medications and who work in healthcare at greater risk of developing COVID-19 than healthcare workers without IBD or with IBD on no immunosuppressant medications.
- How safe are mesalamine medications in terms of COVID-19 outcomes
- Which dose of prednisone/solone is a significant risk?

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Next Steps

- Manuscript
 - Designed around table and text referring to table
 - Appendix – ‘consensus data collection form’
 - RAND-type data collection from IOIBD etc on priorities
- Research Proposal Structures/Protocols
 - Serology registry/biobank
 - Gut Epithelium and virus
 - Stool
 - ‘Speed dating’ for COVID-19 IBD research