Work to mitigate risk for patients with inflammatory bowel disease during the COVID-19 pandemic

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Introduction

- At the start of the COVID-19 pandemic, the risks of immunosuppression for patients with inflammatory bowel disease (IBD) were unclear, though previous studies had demonstrated increased risk of other infections
- IBD clinicians therefore had to consider COVID-19 risk when choosing anti-inflammatory treatment for flaring patients, potentially at the expense of optimal disease control
- Risk management following vaccination was also complicated, as IBD treatments are known to reduce immune response to other vaccines.

Aims

We aimed to investigate the effect of IBD flare treatment changes on patient outcomes during the pandemic and to characterise the adaptations to prescribing. In a separate project, we aimed to explore IBD patients' immune response to the COVID-19 vaccines, which could influence social distancing advice, IBD treatment decisions and booster vaccine policy.

Methods

- **PREPARE-IBD:** case-control observational study; adult patients who had contact with their IBD service because of a flare of symptoms; 60 NHS trusts involved
- Pandemic group: March – June 2020
- Pre-pandemic group: January – June 2019
- Propensity score matched for age and disease activity (Crohn's, n=1460 total; UC, n=2268 total)
- **CLARITY:** prospective observational cohort study; 92 trusts involving 6935 IBD patients on infliximab or vedolizumab
- Anti-S antibody levels checked 8–weekly post-vaccines (geometric mean)
- Post-vaccine T cell function assessed in 301 patients 4–6 weeks post-1st or 2nd dose using IFN-γ-detecting ELISpot after SARS-CoV-2 polypeptide incubation (medians)

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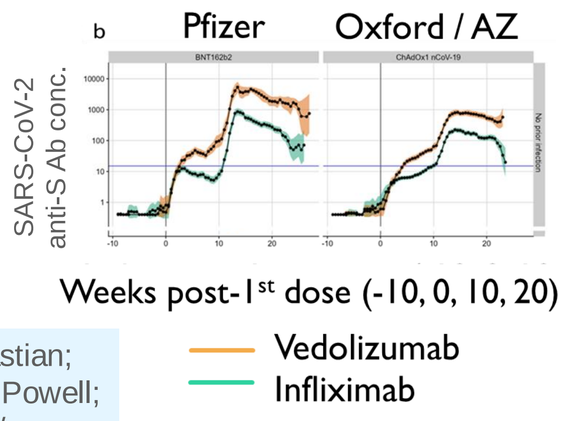
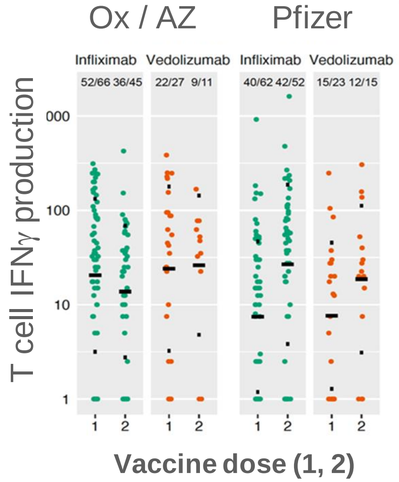
Results

- **PREPARE-IBD** (significant results, p<0.05):
- Crohn's: reduced pred. (26.5% vs 37.1%), increased budesonide (15.6% vs 6.8%) and ustekinumab (10.4% vs 5.6%) in pandemic
- UC: reduced pred. (33.5% vs 40.7%) and thiopurines (4.9% vs 7.1%), increased poorly bioavailable steroids (11.8% vs 5.2%), vedolizumab and ustekinumab in pandemic

→ **No difference steroid-free remission at 3 months**

- **CLARITY:**





→ **Rapid antibody decay with infliximab**

→ **T cell response heightened with Pfizer**