selective serotonin reuptake inhibitors (SSRIs) are the most frequently cited environmental risk factors.

We sought phenotypic and genetic associations with microscopic colitis in European patients enrolled in the UK Biobank.

Methods We undertook a genome-wide association study of 483 cases of microscopic colitis defined by ICD code K52.8 (other specified noninfective gastroenteritis and colitis) and 4 506 16 controls. We tested 9527357 single nucleotide polymorphisms (SNPs) imputed using the haplotype reference consortium (HRC) reference panel. Association tests were performed using a linear mixed model (BOLT-LMM) including age, gender, study centre and chip as covariates. We also tested for associations with classical HLA alleles that were imputed using HLA*IMP 02.

Results Participants with microscopic colitis were older (61.9 [56.2–65.4] vs. controls 58.6 [50.3–63.8], p=5e-15); more frequently male (65.6% [317/483] vs. 54.2% [244/531/450616], p=5e-07); more likely to smoke (14.7% [71/483] vs. 10.4% [467/450616], p=0.003) and were more often also diagnosed with coeliac disease (3.3% [16/483] and 0.4% [199/450616], p=7e-10) than controls. In terms of drug factors, participants with microscopic colitis were more likely to have been exposed to proton-pump inhibitors (20.3% [98/483] cases vs 10.3% [463/450156] controls, p=9e-11) than controls, but not aspirin/NSAIDs or SSRIs.

We found a genome-wide significant association signal within the HLA region. The lead SNP was rs2596560 (OR 67.78 [95% CI 0.68–0.90]), with evidence of an effect on coeliac disease. Multivariable linear analyses showed that microscopic colitis was associated with reduced total MAP (incidence rate ratio 0.78 [95% CI 0.68–0.87]) and left-sided (0.73 [0.61–0.88]) lesions. Evidence that EPA reduced MAP was restricted to conventional (0.86 [0.74–0.99]), left-sided (0.75 [0.60–0.94]) and right-sided (0.75 [0.61–0.88]) adenomas, but not total MAP (0.91 [0.79–1.05]). EPA and aspirin treatment were well tolerated with an excess of mild–moderate GI adverse events (AEs), especially in the E arm. There were 6 bleeding AEs across the treatment arms.

Neither EPA nor aspirin treatment was associated with reduction in the ADRa in ‘high risk’ patients. Secondary analyses revealed no evidence that EPA was effective in reducing the total number of adenomas, but there was some evidence for efficacy of aspirin. Both agents displayed effects on MAP, the total number of adenomas, but not total MAP (0.91 [0.79–1.05]). EPA and aspirin treatment were well tolerated with an excess of mild–moderate GI adverse events (AEs), especially in the E arm. There were 6 bleeding AEs across the treatment arms.

OTU-024 IMPACT OF GFOBT SCREENING IN ENGLAND ON COLORECTAL CANCER MORTALITY
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The omega-3 fatty acid eicosapentaenoic acid (EPA) and aspirin are candidate colorectal cancer (CRC) chemoprevention agents, which both have proof-of-concept for anti-CRC activity in man, aligned with an excellent safety profile.

Methods A randomised, placebo-controlled 2 × 2 factorial trial of EPA free fatty acid (FFA) 2 g daily (E); either as the

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