

IN BRIEF

 COELIAC DISEASE**Blood test for diagnosis more effective than biopsy**

The diagnosis of coeliac disease can be confounded in individuals with a self-prescribed gluten-free diet. In this setting, guidelines suggest a gluten challenge for at least 14 days followed by duodenal biopsy, but this recommendation is based on limited evidence. Now, the responses to a 14-day oral gluten challenge (5.7 g per day) have been studied in 19 patients with biopsy-confirmed coeliac disease. The investigators found that mucosal architecture changes were not established in the majority of patients with coeliac disease after 14 days. However, gluten-specific T cell responses in blood, measured by HLA-DQ:gluten tetramers with flow cytometry, were increased twofold by day 6 in 12 of 15 patients evaluated. These findings suggest that the blood-based test is more sensitive and less invasive than biopsy for diagnosing coeliac disease after short-term gluten challenge, and should be further evaluated.

ORIGINAL ARTICLE Sarna, V. K. et al. HLA-DQ:gluten tetramer test in blood gives better detection of coeliac patients than biopsy after 14-day gluten challenge. *Gut* <http://dx.doi.org/10.1136/gutjnl-2017-314461> (2017)

 LOWER GASTROINTESTINAL TRACT**What are normal bowel movement patterns?**

Understanding normal bowel habits in the general population is important for patients and physicians, but also for determining eligibility and outcome criteria in clinical trials. Using data from a nationwide survey in the USA, researchers have now analysed answers to health questions from adults reporting normal bowel patterns ($n = 4,775$). The majority of individuals (95.9%) reported a bowel movement frequency of 3–21 per week, upholding the common metric of normal frequency (three bowel movements per week up to three per day). However, different criteria for normal stool consistency, assessed using the Bristol stool form scale (BSFS), were found for men and women. Among men, 90% reported a BSFS of 3–5, but for women (90%) it was 2–6. Demographic factors associated with self-reported normalcy included male sex, higher education, income and fibre intake.

ORIGINAL ARTICLE Mitsuhashi, S. et al. Characterizing normal bowel frequency and consistency in a representative sample of adults in the United States (NHANES). *Am. J. Gastroenterol.* <http://dx.doi.org/10.1038/ajg.2017.213> (2017)

 COLORECTAL CANCER**Early MRI imaging predicts regorafenib response**

Regorafenib, a multikinase inhibitor with anti-angiogenic activity, shows efficacy in patients with treatment-refractory metastatic colorectal cancer (mCRC). However, modest efficacy in an unselected patient population indicates that better predictive biomarkers of response to regorafenib are needed for appropriate patient selection. In a prospective phase II study of patients ($n = 27$) with mutant *RAS* mCRC, Khan et al. found that early (day 15 after treatment) imaging with dynamic contrast-enhanced (DCE) MRI, to establish changes in tumour volume, predicted response and long-term outcomes to regorafenib therapy. Reduced tumour vasculature after treatment was confirmed using tissue biopsies and was associated with a marked reduction in circulating tumour DNA (ctDNA) that, if sustained for 8 weeks, led to even better patient outcomes. Thus, combining DCE-MRI with ctDNA as biomarkers of response to regorafenib might improve patient selection.

ORIGINAL ARTICLE Khan, K. et al. Functional imaging and circulating biomarkers of response to regorafenib in treatment-refractory metastatic colorectal cancer patients in a prospective phase II study. *Gut* <http://dx.doi.org/10.1136/gutjnl-2017-314178> (2017)