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Tradipitant, an NK1R antagonist, was found to be safe and effective in reducing nausea, vomiting and overall gastroparesis symptoms in patients with idiopathic and diabetic gastroparesis.

88 **Epidemiologic Burden and Treatment of Chronic Symptomatic Functional Bowel Disorders in the United States: A Nationwide Analysis**

C. Ma, S. E. Congly, K. L. Novak, P. J. Belletrutti, M. Raman, M. Woo, C. N. Andrews, and Y. Nasser

This analysis of national-level survey data (2007-2015) identified over 4 million ambulatory encounters accounting for over \$350 million USD annually in clinic visits for chronic symptomatic functional bowel disorders. <20% of these visits were associated with non-pharmacological management strategies.

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Functional gastrointestinal disorders, such as irritable bowel syndrome, are common worldwide, have negative effects on quality of life, and are a substantial economic burden; further research and new treatment strategies are needed.

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The authors identified a community of bacteria that are reduced in the intestinal microbiomes of patients with UC but when given orally (in spore form) induces remission in about 40% of patients.

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Being born by cesarean section or after prolonged labour increases the chance of developing allergies or obesity. Abnormalities in gut bacteria of babies, including finding *C difficile*, could be the reason for this.

145 **Fecal Microbiota Transplantation Reduces Symptoms in Some Patients With Irritable Bowel Syndrome With Predominant Abdominal Bloating: Short- and Long-term Results From a Placebo-Controlled Randomized Trial**

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See editorial on page 15.

FMT reduces symptoms in some patients with IBS, but effects decrease with time. Studies are needed to identify which patients are most likely to respond and which components of the fecal material are responsible for the therapeutic effects.

158 **Effects of Diet-Modulated Autologous Fecal Microbiota Transplantation on Weight Regain**

E. Rinott, I. Youngster, A. Yaskolka Meir, G. Tsaban, H. Zelicha, A. Kaplan, D. Knights, K. Tuohy, F. Fava, M. U. Scholz, O. Ziv, E. Reuven, A. Tirosh, A. Rudich, M. Blüher, M. Stumvoll, U. Ceglarek, K. Clement, O. Koren, D. D. Wang, F. B. Hu, M. J. Stampfer, and I. Shai

See editorial on page 17.

This study found that participants who lost weight on a healthy diet and were then fed capsules containing fecal material collected during the diet period for months after the maximal weight loss, regained less weight than participants given placebo tablets, by modulating the intestinal microbiota. A plant-based diet (in participants) or Mankai diet (in mice) produced the optimal fecal microbiome for preventing weight regain and for retaining glycemic control.

- 174** **Ambulatory Reflux Monitoring Guides Proton Pump Inhibitor Discontinuation in Patients With Gastroesophageal Reflux Symptoms: A Clinical Trial**
 R. Yadlapati, M. Masihi, C. P. Gyawali, D. A. Carlson, P. J. Kahrilas, B. D. Nix, A. Jain, J. R. Triggs, M. F. Vaezi, L. Kia, A. Kaizer, and J. E. Pandolfino

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Many patients with symptoms of heartburn and regurgitation will not find symptom relief with proton pump inhibitor therapy. Ambulatory reflux monitoring identifies patients that do not require ongoing therapy.

- 183** **Fecal Microbiota Transplantation Is Highly Effective in Real-World Practice: Initial Results From the FMT National Registry**
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Approximately 90% of patients who undergo FMT for *C. difficile* infection can expect to be cured of the infection with few serious side effects due to FMT.

Clinical—Liver

- 193** **Effects of Early Placement of Transjugular Portosystemic Shunts in Patients With High-Risk Acute Variceal Bleeding: a Meta-analysis of Individual Patient Data**
 O. Nicoară-Farcău, G. Han, M. Rudler, D. Angrisani, A. Monescillo, F. Torres, G. Casanovas, J. Bosch, Y. Lv, D. Thabut, D. Fan, V. Hernández-Gea, and J. C. García-Pagán, on behalf of the Preemptive TIPS Individual Data Metanalysis, International Variceal Bleeding Study and Baveno Cooperation Study groups

This study analyzed data from 7 studies of high-risk patients with cirrhosis and acute variceal bleeding and found that preemptive placement of TIPS reduces the risk of death and controls bleeding and ascites better than treatment with drugs and endoscopy.

- 206** **Alterations in Gut Microbiome in Cirrhosis as Assessed by Quantitative Metagenomics: Relationship With Acute-on-Chronic Liver Failure and Prognosis**
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Using metagenomics, we demonstrated that progression of cirrhosis, from compensated to decompensated cirrhosis and ACLF, is associated with parallel remarkable changes in gut-microbiome. Microbiome findings correlated with clinical outcomes, survival and functional changes.

- 219** **Efficacy and Safety of Aldafermin, an Engineered FGF19 Analog, in a Randomized, Double-Blind, Placebo-Controlled Trial of Patients With Nonalcoholic Steatohepatitis**
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In this clinical trial, a drug called aldafermin reduced liver fat and markers of disease progression in patients with NASH, with no adverse side effects.

Basic and Translational—Alimentary Tract

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The authors found that gene expression and DNA methylation patterns in immune cells do not correlate with outcomes of children and adults with IBD, and therefore do not currently support their use to determine prognosis.

- 245** **Expression of R-Spondin 1 in *Apc*^{Min/+} Mice Suppresses Growth of Intestinal Adenomas by Altering Wnt and Transforming Growth Factor Beta Signaling**
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- Common IBD medications have complex and region-specific effect on SARS-CoV-2 receptors, ACE2 and TMPRSS2, in the intestines. Overlapping immune response signatures in COVID-19 patients and IBD patients indicate a potential role for IBD medications in the treatment of COVID-19.
- 302** **Interleukin 33 Triggers Early Eosinophil-Dependent Events Leading to Metaplasia in a Chronic Model of Gastritis-Prone Mice**
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- P. mirabilis* in the gut is associated with CD and can induce inflammation in cells and animal models of colitis. *P. mirabilis* may act as a pathobiont and play a crucial role in the pathogenesis of CD.

Basic and Translational—Liver

- 331** **Steatohepatitis Impairs T-cell-Directed Immunotherapies Against Liver Tumors in Mice**
B. Heinrich, Z. J. Brown, L. P. Diggs, M. Vormehr, C. Ma, V. Subramanyam, U. Rosato, B. Ruf, J. S. Walz, J. C. McVey, S. Wabitsch, Q. Fu, S. J. Yu, Q. Zhang, C. W. Lai, U. Sahin, and T. F. Greten
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Basic and Translational—Pancreas

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Some patients with pancreatic cancer cannot repair damaged DNA in the tumor, and we target this vulnerability using new therapies using new markers that predict response.

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