

# Gastroenterology

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- 494 **Circulating Tumor DNA Analysis for Detection of Minimal Residual Disease After Chemoradiotherapy for Localized Esophageal Cancer**  
*T. D. Azad, A. A. Chaudhuri, P. Fang, Y. Qiao, M. S. Esfahani, J. J. Chabon, E. G. Hamilton, Y. D. Yang, A. Lovejoy, A. M. Newman, D. M. Kurtz, M. Jin, J. Schroers-Martin, H. Stehr, C. L. Liu, A. B.-Y. Hui, V. Patel, D. Maru, S. H. Lin, A. A. Alizadeh, and M. Diehn*

The authors find that detection of tumor DNA in the blood of esophageal cancer patients is associated with survival and may enable personalized treatment decisions.

- 506 Gastric Electrical Stimulation Reduces Refractory Vomiting in a Randomized Crossover Trial**  
 P. Ducrotte, B. Coffin, B. Bonaz, S. Fontaine, S. Bruley Des Varannes, F. Zerbib, R. Caiazza, J. C. Grimaud, F. Mion, S. Hadjadj, P. E. Valensi, L. Vuitton, G. Charpentier, A. Ropert, R. Altwegg, P. Poudroux, E. Dorval, M. Dapoigny, H. Duboc, P. Y. Benhamou, A. Schmidt, N. Donnadieu, G. Gourcerol, and B. Guerci, ENTERRA Research Group  
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In a trial of patients with chronic vomiting that cannot be relieved with other treatments, we found gastric electrical stimulation to reduce vomiting in patients with and without diabetes.

- 515 Development and Validation of a Test to Monitor Endoscopic Activity in Patients With Crohn's Disease Based on Serum Levels of Proteins**  
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We developed a serum test for monitoring Crohn's disease activity, based on endoscopic factors. We show that it accurately monitors Crohn's disease activity in all regions of the intestine.

- 527 Risk Factors and Incidence of Gastric Cancer After Detection of *Helicobacter pylori* Infection: A Large Cohort Study**  
 S. Kumar, D. C. Metz, S. Ellenberg, D. E. Kaplan, and D. S. Goldberg  
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Among US patients with *H pylori*, racial/ethnic minorities and smokers have a higher risk of future gastric cancer. Eradication of *H pylori* infection decreases the risk.

- 537 Efficacy and Safety of Mirikizumab in a Randomized Phase 2 Study of Patients With Ulcerative Colitis**  
 W. J. Sandborn, M. Ferrante, B. R. Bhandari, E. Berliba, B. G. Feagan, T. Hibi, J. L. Tuttle, P. Klekotka, S. Friedrich, M. Durante, M. Morgan-Cox, J. Laskowski, J. Schmitz, and G. R. D'Haens  
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In study of patients with moderate to severely active ulcerative colitis, mirikizumab demonstrated clinical efficacy compared to placebo after 12 weeks and maintained efficacy through 40 weeks of treatment.

- 550 Efficacy and Safety of Etrasimod in a Phase 2 Randomized Trial of Patients With Ulcerative Colitis**  
 W. J. Sandborn, L. Peyrin-Biroulet, J. Zhang, M. Chiorean, S. Vermeire, S. D. Lee, T. Kühbacher, B. Yacyshyn, C. H. Cabell, S. U. Naik, P. Klassen, and J. Panés  
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In a clinical trial, etrasimod reduced clinical and endoscopic features of UC.

- 562 Efficacy and Safety of Vedolizumab Subcutaneous Formulation in a Randomized Trial of Patients With Ulcerative Colitis**  
 W. J. Sandborn, F. Baert, S. Danese, Ž. Krznarić, T. Kobayashi, X. Yao, J. Chen, M. Rosario, S. Bhatia, K. Kisfalvi, G. D'Haens, and S. Vermeire

Patients with active ulcerative colitis who responded to intravenous vedolizumab induction therapy maintain the response after transitioning to subcutaneous vedolizumab treatment.

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 A. D. Singhi, L. D. Wood, E. Parks, M. S. Torbenson, M. Felsenstein, R. H. Hruban, M. N. Nikiforova, A. I. Wald, C. Kaya, Y. E. Nikiforov, L. Favazza, J. He, K. McGrath, K. E. Fasanella, R. E. Brand, A. M. Lennon, A. Furlan, A. K. Dasyam, A. H. Zureikat, H. J. Zeh, K. Lee, D. L. Bartlett, and A. Slivka

Researchers identified a genetic alteration that is specific to intraductal oncocytic papillary neoplasms. This alteration might serve as a marker of patients at risk for these neoplasms.

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- 583** **Isoforms of RNF128 Regulate the Stability of Mutant P53 in Barrett's Esophageal Cells**  
*D. Ray, P. Ray, D. Ferrer-Torres, Z. Wang, D. Nancarrow, H.-w. Yoon, M. San Martinho, T. Hinton, S. Owens, D. Thomas, H. Jiang, T. S. Lawrence, J. Lin, K. Lagisetty, A. C. Chang, and D. G. Beer*  
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Perturbation of relative RNF128 isoform levels enhanced mutant TP53 protein stability during progression towards esophageal adenocarcinoma.
- 598** **Proliferation and Differentiation of Gastric Mucous Neck and Chief Cells During Homeostasis and Injury-induced Metaplasia**  
*J. Burclaff, S. G. Willet, J. B. Sáenz, and J. C. Mills*  
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We found that chief cells, which produce enzymes in they stomach, change into a different cell type, with different functions, in response to injury. Once the injury resolves, chief cells return to their normal activities.
- 610** **Predominantly Antibiotic-resistant Intestinal Microbiome Persists in Patients With Pouchitis Who Respond to Antibiotic Therapy**  
*V. Dubinsky, L. Reshef, N. Bar, D. Keizer, N. Golan, K. Rabinowitz, L. Godny, K. Yadgar, K. Zonensain, H. Tulchinsky, U. Gophna, and I. Dotan*  
E www  
**See editorial on page 470.**  
Patients with pouchitis who respond to antibiotics often require prolonged antibiotic treatment, because of intestinal colonization by bacteria that are resistant to antibiotics and have a low potential for virulence. Once patients stop taking antibiotics, recurrent pouchitis might be caused by invading inflammatory bacteria.
- 625** **Identification of a  $\gamma$ c Receptor Antagonist That Prevents Reprogramming of Human Tissue-resident Cytotoxic T Cells by IL15 and IL21**  
*C. Ciszewski, V. Discepolo, A. Pácis, N. Doerr, O. Tastet, T. Mayassi, M. Maglio, A. Basheer, L. Q. Al-Mawsawi, P. H. R. Green, R. Auricchio, R. Troncone, T. A. Waldmann, N. Azimi, Y. Tagaya, L. B. Barreiro, and B. Jabri*  
www  
Increased levels of cytokines (IL15 and IL21) in intestinal tissues of patients with celiac disease promote proliferation and cytolytic activity of immune cells, which can be prevented with an agent that specifically blocks these 2 cytokines.
- 638** **Chromosome Engineering of Human Colon-Derived Organoids to Develop a Model of Traditional Serrated Adenoma**  
*K. Kawasaki, M. Fujii, S. Sugimoto, K. Ishikawa, M. Matano, Y. Ohta, K. Toshimitsu, S. Takahashi, N. Hosoe, S. Sekine, T. Kanai, and T. Sato*  
www CDV  
We introduced genetic changes into colon tissue organoids that cause them to grow into tumors that resemble TSAs in mice. These mice can be used to study TSA development.
- 652** **Lactose and Fructo-oligosaccharides Increase Visceral Sensitivity in Mice via Glycation Processes, Increasing Mast Cell Density in Colonic Mucosa**  
*J. B. J. Kamphuis, B. Guiard, M. Leveque, M. Olier, I. Jouanin, S. Yvon, V. Tondereau, P. Rivière, F. Guéraud, S. Chevolleau, M.-H. Noguer-Meireles, J.-F. Martin, L. Debrauwer, H. Eutamène, and V. Theodorou*  
www  
Feeding mice lactose or fed fructo-oligosaccharides, which can cause symptoms in patients with irritable bowel syndrome, resulted in an increased abdominal sensitivity in mice. We identified agents that reduced the abdominal pain and changes in the colon that might cause symptoms—these might be developed as treatments for patients.

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- 664** **Disruption of SIRT7 Increases the Efficacy of Checkpoint Inhibitor via MEF2D Regulation of Programmed Cell Death 1 Ligand 1 in Hepatocellular Carcinoma Cells**  
*J. Xiang, N. Zhang, H. Sun, L. Su, C. Zhang, H. Xu, J. Feng, M. Wang, J. Chen, L. Liu, J. Shan, J. Shen, Z. Yang, G. Wang, H. Zhou, J. Prieto, M. A. Ávila, C. Liu, and C. Qian*  
www  
We identified a protein produced by hepatocellular carcinoma cells that allows them to evade the immune response. We identified mechanisms that regulate production of this protein in liver cancer cells that might be targeted for treatment of hepatocellular carcinoma.

- 679 **ZIP4 Increases Expression of Transcription Factor ZEB1 to Promote Integrin  $\alpha3\beta1$  Signaling and Inhibit Expression of the Gemcitabine Transporter ENT1 in Pancreatic Cancer Cells**  
*M. Liu, Y. Zhang, J. Yang, X. Cui, Z. Zhou, H. Zhan, K. Ding, X. Tian, Z. Yang, K.-M. A. Fung, B. H. Edil, R. G. Postier, M. S. Bronze, M. E. Fernandez-Zapico, M. P. Stemmler, T. Brabletz, Y.-P. Li, C. W. Houchen, and M. Li*

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- 732 **AGA Technical Review on Gastric Intestinal Metaplasia—Epidemiology and Risk Factors**  
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