

# Gastroenterology

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  *D. A. Carlson, I. Hirano, N. Gonsalves, P. J. Kahrilas, I. K. Araujo, M. Yang, M.-P. Tetreault, and J. E. Pandolfino*  
A method to define subgroups of eosinophilic esophagitis using measures of esophageal stiffness and narrowing, as well as muscle function (motility), helped to illustrate the severity of eosinophilic esophagitis and may help predict effectiveness of treatment.

#### Gastroduodenal

- 564 Association of Proton Pump Inhibitor Use With Incident Dementia and Cognitive Decline in Older Adults: A Prospective Cohort Study**  
  *R. S. Mehta, B. Kocher, Z. Zhou, J. C. Broder, P. Chung, K. Yang, J. Lockery, M. Fravel, J. Ryan, S. Mahady, S. G. Orchard, J. J. McNeil, A. Murray, R. L. Woods, M. E. Ernst, and A. T. Chan*  
In a rigorously conducted analysis of prospectively collected data, we detected no association between proton pump inhibitor use and incident dementia, cognitive impairment, or changes in cognitive function scores over time.

#### GI Cancer

- 573 Cancer in Patients With Familial Adenomatous Polyposis: A Nationwide Danish Cohort Study With Matched Controls**  
  *J. G. Karstensen, S. Bülow, H. Højden, A. M. Jelsig, N. Jespersen, K. K. Andersen, M. D. Wewer, J. Burisch, and H. C. Pommergaard*

In patients with familial adenomatous polyposis, the risk of cancer, particularly colorectal, duodenal, and pancreatic cancer, remains significantly higher among patients with familial adenomatous polyposis compared with a matched control group.

- 582 A Fecal MicroRNA Signature by Small RNA Sequencing Accurately Distinguishes Colorectal Cancers: Results From a Multicenter Study**  
  *B. Pardini, G. Ferrero, S. Tarallo, G. Gallo, A. Francavilla, N. Licheri, M. Trompetto, G. Clerico, C. Senore, S. Peyre, V. Vymetalkova, L. Vodickova, V. Liska, O. Vycital, M. Levy, P. Macinga, T. Hucl, E. Budinska, P. Vodicka, F. Cordero, and A. Naccarati*

MicroRNAs are involved in colorectal carcinogenesis. This study detected their altered profiles in stool samples of cancer patients and identified a signature capable of accurately discriminating cancer patients.

- 600 Incidence, Risk Factors, and Temporal Trends of Small Intestinal Cancer: A Global Analysis of Cancer Registries**  
  *J. Huang, S. C. Chan, Y. C. Fung, F. Y. Mak, V. Lok, L. Zhang, X. Lin, D. E. Lucero-Prisno III, W. Xu, Z.-J. Zheng, E. Elcarte, M. Withers, M. C. S. Wong, and the NCD Global Health Research Group, Association of Pacific Rim Universities*

There was an overall increasing trend in small intestinal cancer incidence, probably due to the surge in the prevalence of risk factors; intensive lifestyle modification is warranted.

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**Key Genetic Determinants Driving Esophageal Squamous Cell Carcinoma Initiation and Immune Evasion**

*K.-P. Ko, Y. Huang, S. Zhang, G. Zou, B. Kim, J. Zhang, S. Jun, C. Martin, K. J. Dunbar, G. Efe, A. K. Rustgi, H. Nakagawa, and J.-I. Park*

Genetic determinants driving neoplasia and immune evasion to initiate esophageal squamous cell carcinoma, relevant to newly classified patients based on single-cell transcriptomics, were identified.

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**Nucleolar HEAT Repeat Containing 1 Up-regulated by the Mechanistic Target of Rapamycin Complex 1 Signaling Promotes Hepatocellular Carcinoma Growth by Dominating Ribosome Biogenesis and Proteome Homeostasis**

*X.-M. Yang, X.-Q. Wang, L.-P. Hu, M.-X. Feng, Y.-Q. Zhou, D.-X. Li, J. Li, X.-C. Miao, Y.-L. Zhang, L.-L. Yao, H.-Z. Nie, S. Huang, Q. Xia, X.-L. Zhang, S.-H. Jiang, and Z.-G. Zhang*

Nucleolar protein HEAT repeat containing 1 is up-regulated by mechanistic target of rapamycin complex 1 signaling and contributes to hepatocellular carcinoma progression through dominating ribosome biogenesis and proteome homeostasis.

**Functional GI Disease**

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**Prevalence and Associated Factors of Bloating: Results From the Rome Foundation Global Epidemiology Study**

*S. Ballou, P. Singh, J. Nee, V. Rangan, J. Iturrino, G. Geeganage, B. Löwe, S. I. Bangdiwala, O. S. Palsson, A. D. Sperber, A. Lembo, and M. Lehmann*

Bloating is common throughout the world. Bloating prevalence is highest in women, younger age groups, and among individuals who also report chronic gastrointestinal pain.

**Intestinal Inflammation**

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**Hypusination Maintains Intestinal Homeostasis and Prevents Colitis and Carcinogenesis by Enhancing Aldehyde Detoxification**

*A. P. Gobert, T. M. Smith, Y. L. Latour, M. Asim, D. P. Barry, M. M. Allaman, K. J. Williams, K. M. McNamara, A. G. Delgado, S. P. Short, R. G. Mirmira, K. L. Rose, K. L. Schey, I. Zagol-Ikapitte, J. S. Coleman, O. Boutaud, S. Zhao, M. B. Piazuelo, M. K. Washington, L. A. Coburn, and K. T. Wilson*

Hypusine is a specific amino acid that is essential to limit oxidative damage in intestinal epithelial cells, thus preventing inflammation and cancer development.

**Gut Microbiota**

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**Gut Microbiome Composition Is Associated With Future Onset of Crohn's Disease in Healthy First-Degree Relatives**

*J. A. Raygoza Garay, W. Turpin, S.-H. Lee, M. I. Smith, A. Goethel, A. M. Griffiths, P. Moayyedi, O. Espin-Garcia, M. Abreu, G. L. Aumaïs, C. N. Bernstein, I. A. Biron, M. Cino, C. Deslandres, I. Dotan, W. El-Matary, B. Feagan, D. S. Guttman, H. Huynh, L. A. Dieleman, J. S. Hyams, K. Jacobson, D. Mack, J. K. Marshall, A. Otley, R. Panaccione, M. Ropeleski, M. S. Silverberg, A. H. Steinhart, D. Turner, B. Yerushalmi, A. D. Paterson, W. Xu, the CCC GEM Project Research Consortium, and K. Croitoru*

Gut microbiome composition, function, and stool metabolites can identify those more likely to develop Crohn's disease in a cohort of healthy first-degree relatives of patients with Crohn's disease.

**Pancreas**

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**Detailed Characteristics of Post-discharge Mortality in Acute Pancreatitis**

*D. Czapári, A. Váradi, N. Farkas, G. Nyári, K. Márta, S. Váncsa, R. Nagy, B. Teutsch, S. Bunduc, B. Erőss, L. Czakó, Á. Vincze, F. Izbéki, M. Papp, B. Merkely, A. Szentesi, and P. Hegyi, on behalf of the Hungarian Pancreatic Study Group*

Post-discharge mortality in acute pancreatitis is as important as in-hospital mortality. A follow-up plan and a screening program are recommended for patients with acute pancreatitis.

**Hepatobiliary****696**

- Genetic Ancestry, Race, and Severity of Acutely Decompensated Cirrhosis in Latin America**  
*A. Q. Farias, A. Curto Vilalta, P. Momoyo Zitelli, G. Pereira, L. L. Goncalves, A. Torre, J. M. Diaz, A. C. Gadano, A. Z. Mattos, L. S. C. Mendes, M. R. Alvares-da-Silva, P. L. Bittencourt, C. Benitez, C. Alves Couto, M. Mendizabal, C. L. Toledo, D. F. C. Mazo, M. Castillo Barradas, E. M. Uson Raposo, P. M. Padilla-Machaca, A. Zarela Lozano Miranda, R. Malé-Velázquez, A. Castro Lyra, M. B. Dávalos-Moscol, J. L. Pérez Hernández, R. O. Ximenes, G. Faria Silva, O. A. Beltrán-Galvis, M. S. González Huezo, F. Bessone, T. D. S. Rocha, E. Fassio, C. Terra, J. I. Marín, P. Sierra Casas, C. de la Peña-Ramirez, F. Aguilar Parera, F. Fernandes, M. da Penha Zago-Gomes, O. Méndez-Guerrero, S. Marciano, A. A. Mattos, J. C. Oliveira, G. T. S. Guerreiro, L. Codes, M. Arrese, M. J. Nardelli, M. O. Silva, R. Palma-Fernandez, C. Alcantara, C. Sánchez Garrido, J. Trebicka, T. Gustot, J. Fernández, J. Clària, R. Jalan, P. Angeli, V. Arroyo, R. Moreau, and F. J. Carrilho, for the ACLARA Study Collaborators*

Acutely decompensated cirrhosis is a rapid deterioration of patient health leading to nonselective hospital admission. Among patients with acutely decompensated cirrhosis, differences in upstream factors, in particular, genetic ancestry (race) may be associated with differences in health outcomes, such as acute-on-chronic liver failure (characterized by the presence of organ failures) and short-term death (ie, death without liver transplantation within 28 days after presentation). To address these questions, the availability of a comprehensive set of data collected in a recently completed prospective cohort of 1274 Latin American patients nonselectively hospitalized for acutely decompensated cirrhosis was leveraged. Increasing Native American genetic ancestry (and Native American race) was independently associated with increased odds of acute-on-chronic liver failure at presentation, after adjustment for other covariates. Native American genetic ancestry (and its proxy Native American race) are underrepresented in the current acute-on-chronic liver failure medical literature.

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- Procedural-Related Bleeding in Hospitalized Patients With Liver Disease (PROC-BLeeD): An International, Prospective, Multicenter Observational Study**  
*N. M. Intagliata, R. S. Rahimi, F. Higuera-de-la-Tijera, D. A. Simonetto, A. Q. Farias, D. F. Mazo, J. R. Boike, J. G. Stine, M. Serper, G. Pereira, A. Z. Mattos, S. Marciano, J. P. E. Davis, C. Benitez, R. Chadha, N. Méndez-Sánchez, A. S. deLemos, A. Mohanty, M. Dirchwolf, B. E. Fortune, P. G. Northup, J. T. Patrie, and S. H. Caldwell*

Predicting bleeding in patients with cirrhosis undergoing procedures is challenging. Bleeding caused by procedures was rare, and conventional testing did not predict bleeding. Rather, obese patients with advanced liver disease undergoing high-risk procedures were at the highest risk to bleed.

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- A Medium-Chain Fatty Acid Analogue Prevents Intestinal Failure-Associated Liver Disease in Preterm Yorkshire Piglets**  
*S. C. Fligor, S. T. Tsikis, T. I. Hirsch, A. Pan, K. Moskowitzova, L. Rincon-Cruz, A. E. Whitlock, P. D. Mitchell, A. P. Nedder, K. M. Gura, D. A. Fraser, and M. Puder*

In preterm piglets receiving intravenous nutrition for 2 weeks, a medium-chain fatty acid analogue prevented cholestasis and fatty liver (steatosis) and reduced liver scarring (fibrosis).

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- Macrophage-Derived Cathepsin S Remodels the Extracellular Matrix to Promote Liver Fibrogenesis**  
*T. Zuo, Q. Xie, J. Liu, J. Yang, J. Shi, D. Kong, Y. Wang, Z. Zhang, H. Gao, D.-B. Zeng, X. Wang, P. Tao, W. Wei, J. Wang, Y. Li, Q. Long, C. Li, L. Chang, H. Ning, Y. Li, C. Cui, X. Ge, J. Wu, G. Li, X. Hong, X. Yang, E. Dai, F. He, J. Wu, Y. Ruan, S. Lu, and P. Xu*

Cathepsin S, derived mainly from splenic macrophages, specifically cleaved collagen 18A1 to generate endostatin. Released endostatin directly activated hepatic stellate cells via integrin  $\alpha 5\beta 1$  signaling and subsequently promoted fibrosis progression.

**GI Bleeding****762**

- Hemostatic Powder vs Standard Endoscopic Treatment for Gastrointestinal Tumor Bleeding: A Multicenter Randomized Trial**  
*R. Pittayanon, W. Khongka, S. Linlawan, R. Thungsuk, S. Aumkaew, N. Teeratorn, J. Maytapa, S. Kimtrakool, P. Pakvisal, N. Kongtub, R. Rerknimitr, and A. Barkun*

**See editorial on page 536.**

TC-325 hemostatic powder provided better control in active gastrointestinal bleeding from cancer and less recurrent bleeding at 1 month compared to standard endoscopic hemostatic modalities.

**Prevention and Early Detection**

- 773 Global Burden of Digestive Diseases: A Systematic Analysis of the Global Burden of Diseases Study, 1990 to 2019**  
*Y. Wang, Y. Huang, R. C. Chase, T. Li, D. Ramai, S. Li, X. Huang, S. O. Antwi, A. P. Keaveny, and M. Pang*

The global burden of digestive diseases significantly decreased from 1990 to 2019, but digestive diseases remain the most common type of disease, with a significant disparity among countries with varying levels of development.

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*D. A. Corley, C. D. Jensen, J. Chubak, J. E. Schottinger, E. A. Halm, N. Udaltssova, and PROSPR PRECISE Consortium*  
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*V. Chinnasamy, V. Sakulsaengrapha, and S. C. Mathews*

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