

Gastroenterology

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www.gastrojournal.org

Vol. 153, No. 5

November 2017

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Publisher: *Gastroenterology* (ISSN 0016-5085) is published monthly (semi monthly in January and May) in two indexed volumes by Elsevier Inc, 230 Park Avenue, New York, NY 10169-0901, USA. Periodicals postage paid at New York, NY and additional mailing offices. POSTMASTER: Send address changes to Elsevier, Journal Returns, 1799 Highway 50 East, Linn, MO 65051, USA. 2017 US subscription rates: Individual, \$684.00; student and resident, \$261.00. Outside of the U.S. and possessions: individual, \$968.00; student and resident, \$562.00; surface delivery, no additional charge; air mail delivery, add \$78.00. Prices subject to change without notice.

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1227 Active Choice and Financial Incentives to Increase Rates of Screening Colonoscopy—A Randomized Controlled Trial

E WWW *S. J. Mehta, J. Feingold, M. Vandertuyn, T. Niewood, C. Cox, C. A. Doubeni, K. G. Volpp, and D. A. Asch*

See editorial on page 1181.

A \$100 financial incentive increased rates of screening colonoscopy among eligible employees as compared to controls or those who received active choice messaging.

Full Reports

Clinical—Alimentary Tract

1230 Superficial Esophageal Mucosal Afferent Nerves May Contribute to Reflux Hypersensitivity in Nonerosive Reflux Disease

CME

P. Woodland, J. L. Shen Ooi, F. Grassi, K. Nikaki, C. Lee, J. A. Evans, N. Koukias, C. Triantos, S. A. McDonald, M. Peiris, R. Aktar, L. A. Blackshaw, and D. Sifrim

Pain sensing nerve endings are present in close apposition to the surface of the esophagus in patients with nonerosive reflux disease, which might explain why patients with heartburn due to acid reflux more readily perceive pain.

1240 Efficacy and Safety of Relamorelin in Diabetics With Symptoms of Gastroparesis: A Randomized, Placebo-Controlled Study

WWW

M. Camilleri, R. W. McCallum, J. Tack, S. C. Spence, K. Gottesdiener, and F. T. Fiedorek

Gastroparesis is a complication of diabetes with few treatment options. Relamorelin significantly reduced core symptoms associated with diabetic gastroparesis, accelerated emptying of food from the stomach, and was generally safe and well-tolerated.

1251 Association Between Concentrations of Hemoglobin Determined by Fecal Immunochemical Tests and Long-term Development of Advanced Colorectal Neoplasia

WWW

E. J. Grobbee, E. H. Schreuders, B. E. Hansen, M. J. Bruno, I. Lansdorp-Vogelaar, M. C. W. Spaander, and E. J. Kuipers

In a large cohort of an average-risk population undergoing colorectal cancer screening using fecal immunochemical testing, an increased fecal hemoglobin concentration was associated with higher risk of subsequent colorectal advanced neoplasia.

Clinical—Liver

1260 Alcohol Use and Cardiovascular Disease Risk in Patients With Nonalcoholic Fatty Liver Disease

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L. B. VanWagner, H. Ning, N. B. Allen, V. Ajmera, C. E. Lewis, J. J. Carr, D. M. Lloyd-Jones, N. A. Terrault, and J. Siddique

Drinking alcohol did not decrease risk for heart disease in a large, middle-aged population of black and white U.S. adults with fatty liver disease.

1273 Effects of All-Oral Anti-Viral Therapy on HVPg and Systemic Hemodynamics in Patients With Hepatitis C Virus-Associated Cirrhosis

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S. Lens, E. Alvarado-Tapias, Z. Mariño, M.-C. Londoño, E. Llop, J. Martinez, J. I. Fortea, L. Ibañez, X. Ariza, A. Baiges, A. Gallego, R. Bañares, A. Puente, A. Albillos, J. L. Calleja, X. Torras, V. Hernández-Gea, J. Bosch, C. Villanueva, X. Forns, and J. C. García-Pagán

Sustained viral response (SVR) in response to all-oral therapy significantly reduced hepatic venous pressure gradient for HCV-associated cirrhosis patients, as compared to before treatment. Clinical significant portal hypertension persists in most patients despite SVR.

Clinical—Pancreas

1284 Long-term Risk of Pancreatic Malignancy in Patients With Branch Duct Intraductal Papillary Mucinous Neoplasm in a Referral Center

WWW

I. Pergolini, K. Sahara, C. R. Ferrone, V. Morales-Oyarvide, B. M. Wolpin, L. A. Mucci, W. R. Brugge, M. Mino-Kenudson, M. Patino, D. V. Sahani, A. L. Warshaw, K. D. Lillemoe, and C. Fernández-del Castillo

In a retrospective analysis of patients with BD-IPMNs under surveillance, the overall risk of malignancy, almost 8%, lasted for 10 years or more, supporting a strategy of continued surveillance after 5 years.

- 1295** **The Safety and Efficacy of an Alcohol-Free Pancreatic Cyst Ablation Protocol**
 M. T. Moyer, S. Sharzei, A. Mathew, J. M. Levenick, B. D. Headlee, J. T. Blandford, H. D. Heisey, J. H. Birkholz, B. B. Ancrile, J. L. Maranki, N. J. Gusani, T. J. McGarrity, and C. E. Dye

See editorial on page 1183.

Alcohol is not required for effective pancreatic cyst ablation, and an alcohol-free chemoablation approach may be a substantially more attractive treatment option for appropriately selected patients.

Basic and Translational—Alimentary Tract

- 1304** **BRCA1-Associated Protein Increases Invasiveness of Esophageal Squamous Cell Carcinoma**
 Y. Zhao, L. Wei, M. Shao, X. Huang, J. Chang, J. Zheng, J. Chu, Q. Cui, L. Peng, Y. Luo, W. Tan, W. Tan, D. Lin, and C. Wu

Overexpression of BRAP in esophageal squamous-cell carcinoma promotes the aggressiveness of malignant cells via enhancing IKK β phosphorylation by PKC ζ which then activates NF- κ B signaling, and upregulates genes that regulate metastasis.

- 1320** **Circulating and Tissue-Resident CD4⁺ T Cells With Reactivity to Intestinal Microbiota Are Abundant in Healthy Individuals and Function Is Altered During Inflammation**
 A. N. Hegazy, N. R. West, M. J. T. Stubbington, E. Wendt, K. I. M. Suijker, A. Datsi, S. This, C. Danne, S. Campion, S. H. Duncan, B. M. J. Owens, H. H. Uhlig, A. McMichael, Oxford IBD Cohort Investigators, A. Bergthaler, S. A. Teichmann, S. Keshav, and F. Powrie

Reactivity to intestinal bacteria is a normal property of the human CD4⁺ T-cell repertoire and does not in and of itself indicate pathologic host-microbiota interactions.

- 1338** **Activation of Nuclear Factor- κ B by Tumor Necrosis Factor in Intestinal Epithelial Cells and Mouse Intestinal Epithelia Reduces Expression of the Chloride Transporter SLC26A3**
 A. Kumar, I. Chatterjee, T. Gujral, A. Alakkam, H. Coffing, A. N. Anbazhagan, A. Borthakur, S. Saksena, R. K. Gill, W. A. Alrefai, and P. K. Dudeja

In human intestinal epithelial cells (IECs) and intestinal tissues from mice, TNF activated NF- κ B, which reduced expression of the Cl⁻ to HCO₃⁻ exchanger DRA (SLC26A3), and this occurred via direct binding of NF- κ B to the DRA promoter.

- 1351** **Anti-Tumor Necrosis Factor With a Glyco-Engineered Fc-Region Has Increased Efficacy in Mice With Colitis**
 F. M. Bloemendaal, A. D. Levin, M. E. Wildenberg, P. J. Koelink, B. L. McRae, J. Salfeld, J. Lum, M. van der Neut Kofschoten, J. W. Claassens, R. Visser, A. Bentlage, G. R. A. M. D'Haens, J. S. Verbeek, G. Vidarsson, and G. R. van den Brink

Anti-TNF antibodies ameliorate experimental colitis via the interaction of the Fc-region with Fc γ -receptors. Fc-engineered anti-TNF with increased Fc-binding is more effective in reducing experimental colitis.

- 1363** **MFSD2A Promotes Endothelial Generation of Inflammation-Resolving Lipid Mediators and Reduces Colitis in Mice**
 F. Ungaro, C. Tacconi, L. Massimino, P. A. Corsetto, C. Correale, P. Fonteyne, A. Piontini, V. Garzarelli, F. Calcaterra, S. Della Bella, A. Spinelli, M. Carvello, A. M. Rizzo, S. Vetrano, L. Petti, G. Fiorino, F. Furfaro, D. Mavilio, K. R. Maddipati, A. Malesci, L. Peyrin-Biroulet, S. D'Alessio, and S. Danese

MFSD2A regulates the resolution of inflammation by promoting DHA metabolism in intestinal endothelium, and this is impaired in patients with UC. Enhancement of MFSD2A-mediated DHA metabolism dampens intestinal inflammation in vivo.

Basic and Translational—Liver

- 1378** **Transforming Growth Factor- β Promotes Liver Tumorigenesis in Mice via Up-regulation of Snail**
 H. Moon, H.-L. Ju, S. I. Chung, K. J. Cho, J. W. Eun, S. W. Nam, K.-H. Han, D. F. Calvisi, and S. W. Ro

TGF- β promoted hepatic tumorigenesis induced by activated RAS and either p53 down-regulation or modulation of TAZ. SNAI1 upregulation by TGF- β signaling exerted oncogenic effects during the early stages of tumorigenesis in the liver.

1392 Intra-Hepatic Depletion of Mucosal-Associated Invariant T Cells in Hepatitis C Virus-Induced Liver Inflammation

F. J. Bolte, A. C. O'Keefe, L. M. Webb, E. Serti, E. Rivera, T. J. Liang, M. Ghany, and B. Rehermann

See editorial on page 1185.

In analyses of paired blood and liver samples from patients with chronic HCV infection before, during, and after antiviral therapy, intrahepatic MAIT cells were activated by monocyte-derived cytokines and depleted in HCV-induced liver inflammation.

1404 Metabolic Circuit Involving Free Fatty Acids, microRNA 122, and Triglyceride Synthesis in Liver and Muscle Tissues

C. Chai, M. Rivkin, L. Berkovits, A. Simerzin, E. Zorde-Khvalevsky, N. Rosenberg, S. Klein, D. Yaish, R. Durst, S. Shpitzen, S. Udi, J. Tam, J. Heeren, A. Worthmann, C. Schramm, J. Kluwe, R. Ravid, E. Hornstein, H. Giladi, and E. Galun

Mir-122 is a lipid rheostat that exerts effects in the liver via reducing triglyceride production, the site of its expression. Mir-122 also exerts effects in remote tissues after being secreted from the liver by suppressing triglyceride biosynthesis in fat and muscle tissues.

1416 Interactions Between Platelets and Inflammatory Monocytes Affect Sickness Behavior in Mice With Liver Inflammation

C. D'Mello, W. Almishri, H. Liu, and M. G. Swain

See editorial on page 1188.

In liver disease, platelets interact with circulating immune cells, rendering them more inflammatory. These cell aggregations can induce changes in brain function, leading to altered behavior in people with liver disease.

Basic and Translational—Pancreas**1429 Inhibition of Aurora Kinase A Induces Necroptosis in Pancreatic Carcinoma**

Y. Xie, S. Zhu, M. Zhong, M. Yang, X. Sun, J. Liu, G. Kroemer, M. Lotze, H. J. Zeh III, R. Kang, and D. Tang

The compound CCT137690 exhibits significant anti-tumorigenic activity in pancreatic cancer cells via selective inhibition of AURKA and induction of necroptosis.

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