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ORIGINAL RESEARCH

Full Reports

Clinical—Alimentary Tract

1310 Doppler Endoscopic Probe Monitoring of Blood Flow Improves Risk Stratification and Outcomes of Patients With Severe Nonvariceal Upper Gastrointestinal HemorrhageCMB
E
WWW*D. M. Jensen, T. O. G. Kovacs, G. V. Ohning, K. Ghassemi, G. A. Machado, G. S. Dulai, A. Sedarat, R. Jutabha, and J. Gornbein***See editorial on page 1280.**

In a randomized controlled study, endoscopic Doppler probe monitoring of blood flow of severe peptic ulcer and other bleeding lesions was safe and improved clinical outcomes for patients.

1319 Effectiveness of the Korean National Cancer Screening Program in Reducing Gastric Cancer MortalityWWW
COV*J. K. Jun, K. S. Choi, H.-Y. Lee, M. Suh, B. Park, S. H. Song, K. W. Jung, C. W. Lee, I. J. Choi, E.-C. Park, and D. Lee*

This study demonstrates a consistent reduction in gastric cancer mortality with the use of upper endoscopy screening. This reduction was not, however, observed using upper gastrointestinal radiography for screening.

1329 High Incidence of Celiac Disease in a Long-term Study of Adolescents With Susceptibility GenotypesV
WWW
COV*E. Liu, F. Dong, A. E. Barón, I. Taki, J. M. Norris, B. I. Frohnert, E. J. Hoffenberg, and M. Rewers*

Up to 5% of a study population in Denver was estimated to develop evidence of celiac disease autoimmunity, and 3% are predicted to develop celiac disease by adolescence.

1337 Full-Spectrum Endoscopy Improves Surveillance for Dysplasia in Patients With Inflammatory Bowel DiseasesV
WWW
COV*R. W. Leong, M. Ooi, C. Corte, Y. Yau, M. Kermeen, P. H. Katelaris, C. McDonald, and M. Ngu*

A new panoramic view colonoscope (Full Spectrum Endoscopy) missed fewer pre-cancerous lesions compared to standard colonoscopies in patients with IBD.

1345 Mucosal Expression of Type 2 and Type 17 Immune Response Genes Distinguishes Ulcerative Colitis From Colon-Only Crohn's Disease in Treatment-Naive Pediatric Patients

WWW

M. J. Rosen, R. Karns, J. E. Vallance, R. Bezold, A. Waddell, M. H. Collins, Y. Haberman, P. Minar, R. N. Baldassano, J. S. Hyams, S. S. Baker, R. Kellermayer, J. D. Noe, A. M. Griffiths, J. R. Rosh, W. V. Crandall, M. B. Heyman, D. R. Mack, M. D. Kappelman, J. Markowitz, D. E. Moulton, N. S. Leleiko, T. D. Walters, S. Kugathasan, K. T. Wilson, S. P. Hogan, and L. A. Denson

Increased mucosal expression of genes in the rectum associated with type 2 and type 17 immune responses distinguished ulcerative colitis from Crohn's colitis in a large cohort of treatment-naïve pediatric patients.

Clinical—Liver

1358 Timing Affects Measurement of Portal Pressure Gradient After Placement of Transjugular Intrahepatic Portosystemic Shunts in Patients With Portal Hypertension

CMB

G. Silva-Junior, F. Turon, A. Baiges, E. Cerda, Á. García-Criado, A. Blasi, F. Torres, V. Hernandez-Gea, J. Bosch, and J. C. Garcia-Pagan

Portal pressure gradient (PPG) measured in clinically stable patients correlates with long-term PPG and clinical outcomes. Repeat PPG measurements before discharge should be done to attain measurements with reliable predictive value.

1366 Efficacy of Ledipasvir Plus Sofosbuvir for 8 or 12 Weeks in Patients With Hepatitis C Virus Genotype 2 Infection*E. J. Gane, R. H. Hyland, Y. Yang, E. Svarovskaia, L. M. Stamm, D. M. Brainard, J. G. McHutchison, and C. A. M. Stedman*

For treatment-naïve and treatment-experienced patients, ledipasvir–sofosbuvir for 12 weeks is highly effective for the treatment of HCV genotype 2.

1372 Safety and Efficacy of Elbasvir/Grazoprevir in Patients With Hepatitis C Virus Infection and Compensated Cirrhosis: An Integrated Analysis*I. M. Jacobson, E. Lawitz, P. Y. Kwo, C. Hézode, C.-Y. Peng, A. Y. M. Howe, P. Hwang, J. Wahl, M. Robertson, E. Barr, and B. A. Haber*

High rates of virologic cure were achieved in patients with HCV GT1/4 infection receiving elbasvir/grazoprevir for 12 weeks. Patients with baseline resistance require an extension of therapy to 16 weeks and the addition of ribavirin.

1383 Genome-Wide Association Study Identifies *TLL1* Variant Associated With Development of Hepatocellular Carcinoma After Eradication of Hepatitis C Virus Infection*K. Matsuura, H. Sawai, K. Ikeo, S. Ogawa, E. Iio, M. Isogawa, N. Shimada, A. Komori, H. Toyoda, T. Kumada, T. Namisaki, H. Yoshiji, N. Sakamoto, M. Nakagawa, Y. Asahina, M. Kurosaki, N. Izumi, N. Enomoto, A. Kusakabe, E. Kajiwara, Y. Itoh, T. Ide, A. Tamori, M. Matsubara, N. Kawada, K. Shirabe, E. Tomita, M. Honda, S. Kaneko, S. Nishina, A. Suetsugu, Y. Hiasa, H. Watanabe, T. Genda, I. Sakaida, S. Nishiguchi, K. Takaguchi, E. Tanaka, J. Sugihara, M. Shimada, Y. Kondo, Y. Kawai, K. Kojima, M. Nagasaki, K. Tokunaga, and Y. Tanaka, on behalf of the Japanese Genome-Wide Association Study Group for Viral Hepatitis*

See editorial on page 1282.

Genotypic variation in *TLL1* was a strong predictor for developing hepatocellular carcinoma after eradication of Hepatitis C. *TLL1* may contribute to hepatic fibrogenesis and carcinogenesis in humans and rodent models.

1395 Association Between High-Avidity T-Cell Receptors, Induced by α -Fetoprotein–Derived Peptides, and Anti-Tumor Effects in Patients With Hepatocellular Carcinoma*H. Nakagawa, E. Mizukoshi, E. Kobayashi, T. Tamai, H. Hamana, T. Ozawa, H. Kishi, M. Kitahara, T. Yamashita, K. Arai, T. Terashima, N. Iida, K. Fushimi, A. Muraguchi, and S. Kaneko*

In a phase 1 trial, administration of AFP-derived peptides to 15 patients with hepatocellular carcinoma (HCC) did not cause adverse events, and generated T cells with receptors that reacted to the peptides, showing potential clinical benefits for HCC patients.

Basic and Translational—Alimentary Tract**1407 Optogenetic Demonstration of Functional Innervation of Mouse Colon by Neurons Derived From Transplanted Neural Cells***L. A. Stamp, R. M. Gwynne, J. P. P. Foong, A. E. Lomax, M. M. Hao, D. I. Kaplan, C. A. Reid, S. Petrou, A. M. Allen, J. C. Bornstein, and H. M. Young*

Cells transplanted into the mouse colon generate neurons that control muscle function within the intestinal wall.

1419 *Peptostreptococcus anaerobius* Induces Intracellular Cholesterol Biosynthesis in Colon Cells to Induce Proliferation and Causes Dysplasia in Mice*H. Tsoi, E. S. H. Chu, X. Zhang, J. Sheng, G. Nakatsu, S. C. Ng, A. W. H. Chan, F. K. L. Chan, J. J. Y. Sung, and J. Yu*

P anaerobius is a driver bacteria in promoting CRC development, which may be due to its ability to induce cholesterol-dependent proliferation in colonic epithelial cells.

1434 **MicroRNA 301A Promotes Intestinal Inflammation and Colitis-Associated Cancer Development by Inhibiting BTG1**

C. He, T. Yu, Y. Shi, C. Ma, W. Yang, L. Fang, M. Sun, W. Wu, F. Xiao, F. Guo, M. Chen, H. Yang, J. Qian, Y. Cong, and Z. Liu

Levels of MIR301A are increased in intestinal epithelial cells from patients with active IBD, and reduce the expression of BTG1. Strategies to decrease levels of MIR301A levels in colon tissues might be developed to treat patients with IBD and colitis-associated cancer.

Basic and Translational—Liver

1449 **Metabolomic Identification of Subtypes of Nonalcoholic Steatohepatitis**

C. Alonso, D. Fernández-Ramos, M. Varela-Rey, I. Martínez-Arranz, N. Navasa, S. M. Van Liempd, J. L. Lavín Trueba, R. Mayo, C. P. Ilisso, V. G. de Juan, M. Iruarrizaga-Lejarreta, L. delaCruz-Villar, I. Mincholé, A. Robinson, J. Crespo, A. Martín-Duce, M. Romero-Gómez, H. Sann, J. Platon, J. Van Eyk, P. Aspichueta, M. Nouredin, J. M. Falcón-Pérez, J. Anguita, A. M. Aransay, M. L. Martínez-Chantar, S. C. Lu, and J. M. Mato

This study identified 2 major subtypes of NAFLD as well as markers that differentiate steatosis from NASH within each subtype. These results might be used to monitor disease progression and identify therapeutic targets for patients with these disorders.

1462 **Farnesoid X Receptor Activation Promotes Hepatic Amino Acid Catabolism and Ammonium Clearance in Mice**

V. Massafra, A. Milona, H. R. Vos, R. J. J. Ramos, J. Gerrits, E. C. L. Willemsen, J. M. Ramos Pittol, N. Ijssennagger, M. Houweling, H. C. M. T. Prinsen, N. M. Verhoeven-Duif, B. M. T. Burgering, and S. W. C. van Mil

Activation of the Farnesoid X Receptor bile acid sensor regulates amino acid catabolism and detoxification of ammonium via ureagenesis and glutamine synthesis in mice.

1477 **Stearoyl-CoA Desaturase Promotes Liver Fibrosis and Tumor Development in Mice via a Wnt Positive-Signaling Loop by Stabilization of Low-Density Lipoprotein-Receptor-Related Proteins 5 and 6**

K. K. Y. Lai, S.-M. Kweon, F. Chi, E. Hwang, Y. Kabe, R. Higashiyama, L. Qin, R. Yan, R. P. Wu, K. Lai, N. Fujii, S. French, J. Xu, J.-Y. Wang, R. Murali, L. Mishra, J.-S. Lee, J. M. Ntambi, and H. Tsukamoto

Components of an identified Wnt-mediated forward loop linking HSCs and TICs might be therapeutic targets for liver fibrosis and tumors.

Basic and Translational—Pancreas

1492 **Autophagy Is Required for Activation of Pancreatic Stellate Cells, Associated With Pancreatic Cancer Progression and Promotes Growth of Pancreatic Tumors in Mice**

S. Endo, K. Nakata, K. Ohuchida, S. Takesue, H. Nakayama, T. Abe, K. Koikawa, T. Okumura, M. Sada, K. Horioka, B. Zheng, Y. Mizuuchi, C. Iwamoto, M. Murata, T. Moriyama, Y. Miyasaka, T. Ohtsuka, K. Mizumoto, Y. Oda, M. Hashizume, and M. Nakamura

Autophagy leads to activation of pancreatic stellate cells, which promote pancreatic cancer invasiveness; inhibition of this process suppresses pancreatic cancer growth and metastasis.

1507 **Context-Dependent Epigenetic Regulation of Nuclear Factor of Activated T Cells 1 in Pancreatic Plasticity**

N.-M. Chen, A. Neesse, M. L. Dyck, B. Steuber, A. O. Koenig, C. Lubeseder-Martellato, T. Winter, T. Forster, H. Bohnenberger, J. Kitz, K. Reuter-Jessen, H. Griesmann, J. Gaedcke, M. Grade, J.-S. Zhang, W.-C. Tsai, J. Siveke, H.-U. Schildhaus, P. Ströbel, S. A. Johnsen, V. Ellenrieder, and E. Hessmann

This study describes a KRAS-status dependent switch of EZH2-mediated regulation of NFATc1 transcription in pancreatic regeneration and malignant transformation, providing functional and mechanistic insights into context-dependent transcriptional programs in pancreatic plasticity.

Basic and Translational—Biliary**1521 Activation of the Hypoxia Inducible Factor 1 α Subunit Pathway in Steatotic Liver Contributes to Formation of Cholesterol Gallstones**

Y. Asai, T. Yamada, S. Tsukita, K. Takahashi, M. Maekawa, M. Honma, M. Ikeda, K. Murakami, Y. Munakata, Y. Shirai, S. Kodama, T. Sugisawa, Y. Chiba, Y. Kondo, K. Kaneko, K. Uno, S. Sawada, J. Imai, Y. Nakamura, H. Yamaguchi, K. Tanaka, H. Sasano, N. Mano, Y. Ueno, T. Shimosegawa, and H. Katagiri

See editorial on page 1284.

Hepatic HIF1A knockout mice exhibit marked resistance to cholesterol gallstone formation via increased water secretion from hepatocytes. In NAFLD patients, gallstones were associated with hepatic HIF1A activation.

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J. K. Lim, S. L. Flamm, S. Singh, and Y. T. Falck-Ytter, and the Clinical Guidelines Committee of the American Gastroenterological Association

1544 American Gastroenterological Association Institute Technical Review on the Role of Elastography in Chronic Liver Diseases

S. Singh, A. J. Muir, D. T. Dieterich, and Y. T. Falck-Ytter

1578 American Gastroenterological Association Institute Clinical Practice Update—Expert Review: Care of Patients Who Have Achieved a Sustained Virologic Response After Antiviral Therapy for Chronic Hepatitis C Infection

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1588 Hepatitis C Virus Infection Care Pathway—A Report From the American Gastroenterological Association Institute HCV Care Pathway Work Group

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P. B. Ernst

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