

# Gastroenterology

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**E** **www** *M. D. Radyk, J. Burclaff, S. G. Willet, and J. C. Mills*

**See editorial on page 800.**

This study demonstrates that cells which increase the risk for gastric cancer do not come from existing stem cells in the stomach.

**844 A MicroRNA Signature Associated With Metastasis of T1 Colorectal Cancers to Lymph Nodes**

**www** *T. Ozawa, R. Kandimalla, F. Gao, H. Nozawa, K. Hata, H. Nagata, S. Okada, D. Izumi, H. Baba, J. Fleshman, X. Wang, T. Watanabe, and A. Goel*

MicroRNAs in rectal mucosa were associated with the risk of advanced cancer.

**Full Reports****Clinical—Alimentary Tract****849 Low-Dose Aspirin Use Does Not Increase Survival in 2 Independent Population-Based Cohorts of Patients With Esophageal or Gastric Cancer**

**www** *A. D. Spence, J. Busby, B. T. Johnston, J. A. Baron, C. M. Hughes, H. G. Coleman, and C. R. Cardwell*

Low dose aspirin use is not associated with improved survival in patients with gastroesophageal cancer.

**861 No Increase in Risk of Acute Myocardial Infarction in Privately Insured Adults Prescribed Proton Pump Inhibitors vs Histamine-2 Receptor Antagonists (2002-2014)**

**www** *S. N. Landi, R. S. Sandler, V. Pate, and J. L. Lund*

Users of prescription proton pump inhibitors were no more likely to experience an acute myocardial infarction - commonly known as a heart attack - than those prescribed a similar medication: histamine-2-receptor antagonists.

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*P. B. Jeppesen, S. M. Gabe, D. L. Seidner, H.-M. Lee, and C. Olivier*

The authors identified patient characteristics associated with teduglutide effectiveness in reducing parenteral support in patients with short bowel syndrome. Larger absolute effects were found in patients with the most pronounced malabsorption.

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**HLA-DQ-Gluten Tetramer Blood Test Accurately Identifies Patients With and Without Celiac Disease in Absence of Gluten Consumption***V. K. Sarna, K. E. A. Lundin, L. Mørkrid, S.-W. Qiao, L. M. Sollid, and A. Christophersen*

A novel blood test helped identify patients with celiac disease, even among people on a gluten-free diet.

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**Germline Genetic Features of Young Individuals With Colorectal Cancer***E. M. Stoffel, E. Koeppe, J. Everett, P. Ulintz, M. Kiel, J. Osborne, L. Williams, K. Hanson, S. B. Gruber, and L. S. Rozek*

**See editorial on page 788.**

One in five colorectal cancers diagnosed under age 50 have a genetic link. Individuals with colorectal cancer at a young age should be referred for genetic evaluation.

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WWW

**Factors That Contribute to Differences in Survival of Black vs White Patients With Colorectal Cancer***H. M. Sineshaw, K. Ng, W. D. Flanders, O. W. Bråwley, and A. Jemal*

Insurance coverage differences accounted for approximately 50% of the difference in survival rate between black vs white patients with colorectal cancer, 18–64 years old; tumor characteristics accounted for about 25% of the difference.

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**Association Between Coffee Intake After Diagnosis of Colorectal Cancer and Reduced Mortality***Y. Hu, M. Ding, C. Yuan, K. Wu, S. A. Smith-Warner, F. B. Hu, A. T. Chan, J. A. Meyerhardt, S. Ogino, C. S. Fuchs, E. L. Giovannucci, and M. Song*

**See editorial on page 790.**

Patients with higher consumption of coffee (both caffeinated and decaffeinated) before and after colorectal cancer diagnosis had significantly lower risk of death.

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**Computed Tomography Colonography vs Colonoscopy for Colorectal Cancer Surveillance After Surgery***D. S. Weinberg, P. J. Pickhardt, D. H. Bruining, K. Edwards, J. G. Fletcher, M. J. Gollub, E. M. Keenan, S. S. Kupfer, T. Li, S. J. Lubner, A. J. Markowitz, and E. A. Ross*

In patients with recent colorectal cancer resection, CT colonography did not detect colorectal polyps as well as optical colonoscopy.

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**Efficacy of Indigo Naturalis in a Multicenter Randomized Controlled Trial of Patients With Ulcerative Colitis***M. Naganuma, S. Sugimoto, K. Mitsuyama, T. Kobayashi, N. Yoshimura, H. Ohi, S. Tanaka, A. Andoh, N. Ohmiya, K. Saigusa, T. Yamamoto, Y. Morohoshi, H. Ichikawa, K. Matsuoka, T. Hisamatsu, K. Watanabe, S. Mizuno, W. Suda, M. Hattori, S. Fukuda, A. Hirayama, T. Abe, M. Watanabe, T. Hibi, Y. Suzuki, and T. Kanai, for the INDIGO Study Group*

**See editorial on page 792.**

Indigo naturalis, a naturally occurring compound, may decrease inflammation in patients with ulcerative colitis, although additional data is needed regarding its safety profile.

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WWW

**Pyrin Inflammasome Regulates Tight Junction Integrity to Restrict Colitis and Tumorigenesis***D. Sharma, A. Malik, C. S. Guy, R. Karki, P. Vogel, and T.-D. Kanneganti*

An inflammatory-related substance in the body, pyrin inflammasome, may alter the "leakiness" of cell barriers, modify inflammation, and alter cancer-related changes.

**Clinical—Liver****965** **Combination of Gene Expression Signature and Model for End-Stage Liver Disease Score Predicts Survival of Patients With Severe Alcoholic Hepatitis**

*E. Trépo, N. Goossens, N. Fujiwara, W.-M. Song, A. Colaprico, A. Marot, L. Spahr, P. Demetter, C. Sempoux, G. Y. Im, J. Saldarriaga, T. Gustot, J. Devière, S. N. Thung, C. Minsart, T. Sersté, G. Bontempi, K. Abdelrahman, J. Henrion, D. Degré, V. Lucidi, L. Rubbia-Brandt, V. D. Nair, C. Moreno, P. Deltenre, Y. Hoshida, and D. Franchimont*

In this multicenter study, a combination of a gene signature and the MELD score (gs-MELD score) predicts short-term survival of patients with severe alcoholic hepatitis treated with or without corticosteroids.

**976** **Patterns of Resistance-Associated Substitutions in Patients With Chronic HCV Infection Following Treatment With Direct-Acting Antivirals**

*J. Dietz, S. Susser, J. Vermehren, K.-H. Peiffer, G. Grammatikos, A. Berger, P. Ferenci, M. Buti, B. Müllhaupt, B. Hunyady, H. Hinrichsen, S. Mauss, J. Petersen, P. Buggisch, G. Felten, D. Hüppe, G. Knecht, T. Lutz, E. Schott, C. Berg, U. Spengler, T. von Hahn, T. Berg, S. Zeuzem, and C. Sarrazin, for the European HCV Resistance Study Group*

Treating patients with new direct-acting hepatitis C treatments may lead to certain new resistant viruses.

**989** **Efficacy of Ledipasvir and Sofosbuvir Treatment of HCV Infection in Patients Coinfected With HBV**

*C.-J. Liu, W.-L. Chuang, I.-S. Sheen, H.-Y. Wang, C.-Y. Chen, K.-C. Tseng, T.-T. Chang, B. Massetto, J. C. Yang, C. Yun, S. J. Knox, A. Osinusi, G. Camus, D. Jiang, D. M. Brainard, J. G. McHutchison, T.-H. Hu, Y.-C. Hsu, G.-H. Lo, C.-J. Chu, J.-J. Chen, C.-Y. Peng, R.-N. Chien, and P.-J. Chen*

See editorial on page 795.

In patients with both hepatitis C and hepatitis B, treatment of their hepatitis C did not commonly lead to major flares of their hepatitis B.

**Clinical—Pancreas****998** **Prognostic Utility of Total <sup>68</sup>Ga-DOTATATE-Avid Tumor Volume in Patients With Neuroendocrine Tumors**

*A. Tirosh, G. Z. Papadakis, C. Millo, D. Hammoud, S. M. Sadowski, P. Herscovitch, K. Pacak, S. J. Marx, L. Yang, P. Nockel, J. Shell, P. Green, X. M. Keutgen, D. Patel, N. Nilubol, and E. Kebebew*

In a prospective study, the authors demonstrated the prognostic utility of <sup>68</sup>Ga-DOTATATE TV in a large cohort of patients with NETs, in terms of PFS and disease-specific mortality.

**Basic and Translational—Alimentary Tract****1009** **Enteric Delivery of Regenerating Family Member 3 alpha Alters the Intestinal Microbiota and Controls Inflammation in Mice With Colitis**

*M. Darnaud, A. Dos Santos, P. Gonzalez, S. Augui, C. Lacoste, C. Desterke, G. De Hertogh, E. Valentino, E. Braun, J. Zheng, R. Boisgard, C. Neut, L. Dubuquoy, F. Chiappini, D. Samuel, P. Lepage, F. Guerrieri, J. Doré, C. Bréchet, N. Moniaux, and J. Faivre*

The innate immune lectin REG3A (HIP/PAP) shapes the composition of the gut resident microbiota and alleviates inflammation in mouse models of colitis.

**1024 Nanoliposome C6-Ceramide Increases the Anti-tumor Immune Response and Slows Growth of Liver Tumors in Mice**

G. Li, D. Liu, E. T. Kimchi, J. T. Kaifi, X. Qi, Y. Manjunath, X. Liu, T. Deering, D. M. Avella, T. Fox, D. C. Rockey, T. D. Schell, M. Kester, and K. F. Staveley-O'Carroll

This study leads to the major advances into the understanding of cellular and molecular mechanisms of LipC6 in activating antitumor immune response that lays the foundation of its clinical application.

**1037 Interactions Between Diet and the Intestinal Microbiota Alter Intestinal Permeability and Colitis Severity in Mice**

S. R. Llewellyn, G. J. Britton, E. J. Contijoch, O. H. Vennaro, A. Mortha, J.-F. Colombel, A. Grinspan, J. C. Clemente, M. Merad, and J. J. Faith

Specific macronutrients were identified to impact mouse colitis. The largest disease alleviation was obtained by increasing the beneficial nutrients and decreasing the deleterious ones.

**Basic and Translational—Liver****1047 Tumor Necrosis Factor-Producing T-regulatory Cells Are Associated With Severe Liver Injury in Patients With Acute Hepatitis A**

Y. S. Choi, M. K. Jung, J. Lee, S. J. Choi, S. H. Choi, H. W. Lee, J.-J. Lee, H. J. Kim, S. H. Ahn, D. H. Lee, W. Kim, S.-H. Park, J. R. Huh, H.-P. Kim, J. Y. Park, and E.-C. Shin

See editorial on page 798.

Treg cells from acute hepatitis A (AHA) patients produce tumor necrosis factor (TNF) and have reduced suppressive activity. TNF-producing Treg cells are associated with severe liver injury in AHA patients.

**Basic and Translational—Pancreas****1061 Prevalence of Microsatellite Instability in Intraductal Papillary Mucinous Neoplasms of the Pancreas**

R. M. Lupinacci, A. Goloudina, O. Buhard, J.-B. Bachet, R. Maréchal, P. Demetter, J. Cros, A. Bardier-Dupas, A. Collura, P. Cervera, A. Scriva, S. Dumont, P. Hammel, A. Sauvanet, C. Louvet, J.-R. Delpéro, F. Paye, J.-C. Vaillant, T. André, J. Closset, J.-F. Emile, J.-L. Van Laethem, V. Jonchère, I. Abd Alsamad, M. Antoine, A. Rodenas, J.-F. Fléjou, N. Dusetti, J. Iovanna, A. Duval, and M. Svrcek

MSI occurs in 1.5% of PDACs, but preferentially in IPMNs (7% of cases). MSI PDACs are likely to be related to Lynch syndrome and display immunogenic profiles including overexpression of PD-L1.

**Basic and Translational—Biliary****1066 MIR21 Drives Resistance to Heat Shock Protein 90 Inhibition in Cholangiocarcinoma**

A. Lampis, P. Carotenuto, G. Vlachogiannis, L. Cascione, S. Hedayat, R. Burke, P. Clarke, E. Bosma, M. Simbolo, A. Scarpa, S. Yu, R. Cole, E. Smyth, J. F. Mateos, R. Begum, B. Hezelova, Z. Eltahir, A. Wotherspoon, N. Fotiadis, M. A. Bali, C. Nepal, K. Khan, M. Stubbs, J. C. Hahne, P. Gasparini, V. Guzzardo, C. M. Croce, S. Eccles, M. Fassan, D. Cunningham, J. B. Andersen, P. Workman, N. Valeri, and C. Braconi

HSP90-inhibitors may be promising in the treatment of cholangiocarcinoma that don't express high levels of microRNA21 using a combination of in vitro models, ex vivo patients derived organoids, and organoids-derived in vivo models.

**1080 Mouse Model of Alagille Syndrome and Mechanisms of Jagged1 Missense Mutations**

E. R. Andersson, I. V. Chivukula, S. Hankeova, M. Sjöqvist, Y. L. Tsoi, D. Ramsköld, J. Masek, A. Elmansuri, A. Hoogendoorn, E. Vazquez, H. Storvall, J. Netušilová, M. Huch, B. Fischler, E. Ellis, A. Contreras, A. Nemeth, K. C. Chien, H. Clevers, R. Sandberg, V. Bryja, and U. Lendahl

See editorial on page 803.

A new mouse model for Alagille syndrome, bearing a receptor-selective mutation in *Jag1*, shows that bile duct polarity and maturation are disrupted in the model, and in patients with Alagille syndrome.

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