

Gastroenterology

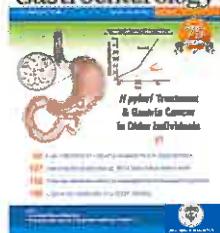
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- 29 Activity of Mesothelin-Specific Chimeric Antigen Receptor T Cells Against Pancreatic Carcinoma Metastases in a Phase 1 Trial
E *WWW* *G. L. Beatty, M. H. O'Hara, S. F. Lacey, D. A. Torigian, F. Nazimuddin, F. Chen, I. M. Kulikovskaya, M. C. Soulen, M. McGarvey, A. M. Nelson, W. L. Gladney, B. L. Levine, J. J. Melenhorst, G. Plesa, and C. H. June*
See editorial on page 11.

In this study, the authors investigated autologous CAR T cells in a small cohort of patients with advanced pancreatic ductal adenocarcinoma. They show safety and signs of modest anti-tumor activity.

- 33 Gut Microbiota Promotes Tumor Growth in Mice by Modulating Immune Response
WWW *V. Sethi, S. Kurptom, M. Tarique, S. Lavania, Z. Malchiodi, L. Hellmund, L. Zhang, U. Sharma, B. Giri, B. Garg, A. Ferrantella, S. M. Vickers, S. Banerjee, R. Dawra, S. Roy, S. Ramakrishnan, A. Saluja, and V. Dudeja*

Gut microbiome depletion reduces cancer growth in mouse models by increasing the infiltration of anti-cancer immune cells inside tumor.

Full Reports

Clinical—Alimentary Tract

- 38 Thirty-Day Readmission Among Patients With Non-Variceal Upper Gastrointestinal Hemorrhage and Effects on Outcomes
WWW *M. S. Abougergi, H. Peluso, and J. R. Saltzman*

The 30-day readmission rate among patients with non-variceal upper gastrointestinal hemorrhage is 13%. Readmission is most often for recurrent gastrointestinal hemorrhage and associated with increased mortality, morbidity and resource utilization.

- 47 Improvement in Gastrointestinal Symptoms After Cognitive Behavior Therapy for Refractory Irritable Bowel Syndrome
V *WWW* *J. M. Lackner, J. Jaccard, L. Keefer, D. M. Brenner, R. S. Firth, G. D. Gudleski, F. A. Hamilton, L. A. Katz, S. S. Krasner, C.-X. Ma, C. D. Radziwon, and M. D. Sitrin*

In a randomized controlled trial, a primarily home-based version of cognitive behavior therapy produced significant and long-term gastrointestinal symptom improvement for patients with irritable bowel syndrome compared to education.

58 **Association Between Obesity and Weight Change and Risk of Diverticulitis in Women**
 *W. Ma, M. Jovani, P.-H. Liu, L. H. Nguyen, Y. Cao, I. Tam, K. Wu, E. L. Giovannucci, L. L. Strate, and A. T. Chan*

In a prospective cohort of women, an association between body mass index and risk of diverticulitis independent of other dietary and lifestyle factors was found. Weight gain from early adulthood was also associated with increased risk.

67 **Effects of *Helicobacter pylori* Treatment on Incidence of Gastric Cancer in Older Individuals**
  *W. K. Leung, I. O. L. Wong, K. S. Cheung, K. F. Yeung, E. W. Chan, A. Y. S. Wong, L. Chen, I. C. K. Wong, and D. Y. Graham*

Treatment of *H pylori* infection was associated with a lower risk of gastric cancer, particularly in older subjects, 10 or more years after treatment.

76 **Identification of Endpoints for Development of Antifibrosis Drugs for Treatment of Crohn's Disease**
 *S. Danese, S. Bonovas, A. Lopez, G. Fiorino, W. J. Sandborn, D. T. Rubin, M. A. Kamm, J.-F. Colombel, B. E. Sands, S. Vermeire, J. Panes, G. Rogler, G. D'Haens, and L. Peyrin-Biroulet*

A systematic review and a Delphi consensus identified a core set of critical endpoints for future clinical trials on anti-fibrotic drugs in Crohn's disease.

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 *K. Weigl, H. Thomsen, Y. Balavarca, J. N. Hellwege, M. J. Shrubsole, and H. Brenner*

A risk score using genetic data selectively predicts presence of colorectal cancer and its precursors in a screening cohort and could be used for risk-adapted screening starting ages.

99 **Effectiveness of Colorectal Cancer Screening in Detecting Earlier-Stage Disease—A Nationwide Cohort Study in Denmark**
M. B. Larsen, S. Njor, P. Ingeholm, and B. Andersen

The findings from this study substantiate the introduction of FIT-based CRC screening to detect CRC in earlier stages and thereby secure better prognosis for the patients.

Clinical—Liver

107 **Improved Diet Quality Associates With Reduction in Liver Fat, Particularly in Individuals With High Genetic Risk Scores for Nonalcoholic Fatty Liver Disease**
  *J. Ma, R. Hennein, C. Liu, M. T. Long, U. Hoffmann, P. F. Jacques, A. H. Lichtenstein, F. B. Hu, and D. Levy*

Improving diet quality is associated with lower liver fat, particularly in individuals with more genetic risk for fatty liver disease.

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118 **Identification of Variants in RET and IHH Pathway Members in a Large Family With History of Hirschsprung Disease**
 *Y. Sribudiani, R. K. Chauhan, M. M. Alves, L. Petrova, E. Brosens, C. Harrison, T. Wabbersen, B. M. de Graaf, T. Rügenbrink, G. Burzynski, R. W. W. Brouwer, W. F. J. van IJcken, S. M. Maas, A. de Klein, J. Osinga, B. J. L. Eggen, A. J. Burns, A. S. Brooks, I. T. Shepherd, and R. M. W. Hofstra*

In a multigenerational family with a history of Hirschsprung disease, the combination of rare variants in members of the RET and IHH pathways leads to disease development.

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Intestinal Failure and Aberrant Lipid Metabolism in Patients With DGAT1 Deficiency

J. M. van Rijn, R. C. Ardy, Z. Kuloğlu, B. Härter, D. Y. van Haften-Visser, H. P. J. van der Doef, M. van Hoesel, A. Kansu, A. H. M. van Vugt, M. Thian, F. T. M. Kokke, A. Krolo, M. K. Başaran, N. G. Kaya, A. Ü. Aksu, B. Dalgiç, F. Ozçay, Z. Baris, R. Kain, E. C. A. Stigter, K. D. Lichtenbelt, M. P. G. Massink, K. J. Duran, J. B. G. M Verheij, D. Lugtenberg, P. G. J. Nikkels, H. G. F. Brouwer, H. J. Verkade, R. Scheenstra, B. Spee, E. E. S. Nieuwenhuis, P. J. Coffer, A. R. Janecke, G. van Haften, R. H. J. Houwen, T. Müller, S. Middendorp, and K. Boztug

The authors identified five novel loss-of-function DGAT1 mutations in six pedigrees leading to altered gut lipid metabolism, lipotoxicity and fat intolerance, which can be rescued with exogenous DGAT1 and DGAT2 in vitro.

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In Inflamed Intestinal Tissues and Epithelial Cells, Interleukin 22 Signaling Increases Expression of H19 Long Noncoding RNA, Which Promotes Mucosal Regeneration

H. Geng, H.-F. Bu, F. Liu, L. Wu, K. Pfeifer, P. M. Chou, X. Wang, J. Sun, L. Lu, A. Pandey, M. S. Bartolomei, I. G. De Plaeen, P. Wang, J. Yu, J. Qian, and X.-D. Tan

H19 is an IL22-induced long non-coding RNA in intestinal epithelial cells. *H19* blocks the activation of several negative regulators of cell proliferation; thus, its induction by the inflammatory cytokine IL22 promotes regeneration of damaged epithelial tissue in the gut.

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M. D. Stachler, N. D. Camarda, C. Deitrick, A. Kim, A. T. Agoston, R. D. Odze, J. L. Hornick, A. Nag, A. R. Thorner, M. Ducar, A. Noffsinger, R. H. Lash, M. Redston, S. L. Carter, J. M. Davison, and A. J. Bass

Changes in cells that can give rise to esophageal cancer can be detected before the development of cancer. These changes may be used to identify those at risk of getting esophageal cancer.

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Female-Specific Association Between Variants on Chromosome 9 and Self-Reported Diagnosis of Irritable Bowel Syndrome

F. Bonfiglio, T. Zheng, K. Garcia-Etxebarria, F. Hadizadeh, L. Bujanda, F. Bresso, L. Agreus, A. Andreasson, A. Dlugosz, G. Lindberg, P. T. Schmidt, P. Karling, B. Ohlsson, M. Simren, S. Walter, G. Nardone, R. Cuomo, P. Usai-Satta, F. Galeazzi, M. Neri, P. Portincasa, M. Bellini, G. Barbara, A. Latiano, M. Hüenthal, V. Thijs, M. G. Netea, D. Jonkers, L. Chang, E. A. Mayer, M. M. Wouters, G. Boeckxstaens, M. Camilleri, A. Franke, A. Zhernakova, and M. D'Amato

This large GWAS study of >300,000 people from UK identified a region on chromosome 9 that affects IBS risk in the general population, but only in women.

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Nonlytic Lymphocytes Engineered to Express Virus-Specific T-Cell Receptors Limit HBV Infection by Activating APOBEC3

S. Koh, J. Kah, C. Y. L. Tham, N. Yang, E. Ceccarello, A. Chia, M. Chen, A. Khakpoor, A. Pavesi, A. T. Tan, M. Dandri, and A. Bertoletti

Non-lytic T-cell receptor-reprogrammed human T cells limit HBV infection through activation of APOBEC3 without overt hepatotoxicity.

Basic and Translational—Pancreas

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ARID1A Maintains Differentiation of Pancreatic Ductal Cells and Inhibits Development of Pancreatic Ductal Adenocarcinoma in Mice

Y. Kimura, A. Fukuda, S. Ogawa, T. Maruno, Y. Takada, M. Tsuda, Y. Hiramatsu, O. Araki, M. Nagao, T. Yoshikawa, K. Ikuta, T. Yoshioka, Z. Wang, H. Akiyama, C. V. Wright, K. Takaori, S. Uemoto, T. Chiba, and H. Seno

Pancreatic Arid1a deletion collaborates with mutant Kras to form IPMN and IPMN-derived PDAC, demonstrating that Arid1a acts as a tumor suppressor in the murine pancreas in the presence of mutant Kras.

210 Immune Cell Production of Interleukin 17 Induces Stem Cell Features of Pancreatic Intraepithelial Neoplasia Cells

Y. Zhang, M. Zoltan, E. Riquelme, H. Xu, I. Sahin, S. Castro-Pando, M. F. Montiel, K. Chang, Z. Jiang, J. Ling, S. Gupta, W. Horne, M. Pruski, H. Wang, S.-C. Sun, G. Lozano, P. Chiao, A. Maitra, S. D. Leach, J. K. Kolls, E. Vilar, T. C. Wang, J. M. Bailey, and F. McAllister

This study finds a novel link between immune components of chronic pancreatitis and pancreatic tumorigenesis. Novel IL-17-target genes with prognostic and potential therapeutic relevance were discovered.

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