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Long-term exposure to high levels of fine ($\leq 2.5 \mu\text{m}$) particulate matter is associated with an increased risk of esophageal cancer.

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- 71 **The Long Noncoding RNA Cardiac Mesoderm Enhancer-Associated Noncoding RNA (*Carmn*) Is a Critical Regulator of Gastrointestinal Smooth Muscle Contractile Function and Motility**
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The muscle cells of the gastrointestinal tract provide the force to move food. Our understanding of muscle cell function has been based on the actions of proteins, but the current study found that *Carmn*, a special type of long noncoding RNAs found in muscle cells, is critical for muscle contraction, gastrointestinal movement, and survival.

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Gastric signet-ring cell adenocarcinoma is a rare gastric cancer subtype associated with poor patient survival. We provide the first molecular portrayal of immune components in this disease through integrative single-cell transcriptomic and proteomic profiling.

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Inflammatory Bowel Disease**149 Comparative Effectiveness of Anti-TNF in Combination With Low-Dose Methotrexate vs Anti-TNF Monotherapy in Pediatric Crohn's Disease: A Pragmatic Randomized Trial**

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Tumor necrosis factor inhibitors, including infliximab and adalimumab, are a mainstay of pediatric Crohn's disease therapy; however, nonresponse and loss of response is common. Combination therapy with methotrexate may improve response. This randomized clinical trial compared tumor necrosis factor inhibitor combination therapy with methotrexate to tumor necrosis factor inhibitor alone. Combination therapy outperformed monotherapy for patients starting adalimumab, but not infliximab.

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L. Bonjoch, C. Fernandez-Rozadilla, M. Alvarez-Barona, A. Lopez-Novo, C. Herrera-Pariente, J. Amigo, L. Bujanda, D. Remedios, A. Dacal, J. Cubiella, F. Balaguer, F. Fern  ndez-Ba  ares, A. Carracedo, R. Jover, S. Castellvi-Bel, and C. Ruiz-Ponte

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B. Lee, E. K. Jones, M. Manohar, L. Li, D. Yadav, D. L. Conwell, P. A. Hart, S. S. Vege, E. L. Fogel, J. Serrano, D. Andersen, M. D. Bellin, M. D. Topazian, S. K. Van Den Eeden, S. J. Pandol, C. E. Forsmark, W. E. Fisher, W. G. Park, S. Z. Husain, and A. Habtezion, on behalf of the Consortium for the Study of Chronic Pancreatitis, Diabetes, and Pancreatic Cancer (CPDPC)

Analysis of serum immune markers in a large cohort of pancreatitis allowed the identification of distinct immune markers that could serve as potential biomarkers providing mechanistic insights into pancreatitis progression.

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In an animal model for Wilson's disease, the peptide ARBM101 drains excess liver copper down to normal levels within days, plausibly suggesting new treatment concepts for this disease.

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H. Han, X. Ge, S. S. B. Komakula, R. Desert, S. Das, Z. Song, W. Chen, D. Athavale, H. Gaskell, D. Lantvit, G. Guzman, and N. Nieto

Currently, there are no approved treatments for nonalcoholic steatohepatitis, making this a major unmet clinical need. Although dynamic changes in liver macrophage subsets during the pathogenesis of nonalcoholic steatohepatitis link these shifts to pathologic tissue remodeling, macrophages also have potential to reduce steatosis and fibrosis, an aspect of macrophage function that has been understudied. Thus, the significance of this proposal lies in the delineation, of the not previously known, protective role of osteopontin in macrophages in nonalcoholic steatohepatitis.

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E. Kharazmi, D. Scherer, F. Boekstegers, Q. Liang, K. Sundquist, J. Sundquist, M. Fallah, and J. Lorenzo Bermejo

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228 The Epigenetic Reader, Bromodomain Containing 2, Mediates Cholangiocyte Senescence via Interaction With ETS Proto-Oncogene 1

J.-H. Kang, P. L. Splinter, C. E. Trussoni, N. E. Pirius, G. J. Gores, N. F. LaRusso, and S. P. O'Hara

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Fecal-based colorectal cancer screening is effective when there is adherence to the program of sequential (annual) testing. In circumstances when the uptake of fecal-based tests is suboptimal, colonoscopy should be considered in order to obtain maximum benefit.

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