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36 Adaptive Evolution of the GDH2 Allosteric Domain Promotes Gliomagenesis by Resolving IDH1-R132H-Induced Metabolic Liabilities
   Significance: These findings show that the hominid-specific brain enzyme GDH2 may be essential to mitigate metabolic liabilities created by IDH1 mutations in glioma, with possible implications to leverage its therapeutic management by IDH1 inhibitors.

51 CBX8 Exhibits Oncogenic Activity via AKT/β-Catenin Activation in Hepatocellular Carcinoma
   Chris Zhuiyi Zhang, Shi-Lu Chen, Chun-Hua Wang, Yang-Fan He, Xia Yang, Dan Xie, and Jing-Ping Yun
   Significance: Elucidation of a key new element of the β-catenin signaling pathway in liver cancer may suggest new therapeutic targets.

64 MYC Targeted Long Noncoding RNA DANCR Promotes Cancer in Part by Reducing p21 Levels
   Significance: These findings expand knowledge of how MYC drives cancer cell proliferation by identifying an oncogenic long noncoding RNA that is widely overexpressed in human cancers.

75 Deficiency in Protein Tyrosine Phosphatase PTP1B Shortens Lifespan and Leads to Development of Acute Leukemia
   Samantha Le Sommer, Nicola Morrice, Martina Pesaresi, Dawn Thompson, Mark A. Vickers, Graeme I. Murray, Nimesh Mody, Benjamin G. Neel, Kendra K. Rence, Heather M. Wilson, and Mirela Delibegovic
   Significance: This study defines a tumor suppressor function for the protein tyrosine phosphatase PTP1B in myeloid lineage cells, with evidence that its genetic inactivation in mice is sufficient to drive acute myeloid leukemia.

88 TGFβ Promotes Genomic Instability after Loss of RUNX3
   Vaidhehi Krishnan, Yu Lin Chong, Tuan Zea Tan, Madhura Kulkarni, Muhammad Bakhtai Bin Rahmat, Lavina Sierra Tay, Haresh Sankar, Doorgesh S. Jokhun, Amudha Ganesan, Linda Shyue Huey Chuang, Dominic C. Voon, GV Shivashankar, Jean-Paul Thiery, and Yoshiaki Ito
   Significance: RUNX3 inactivation in cancer removes an antioxidant barrier against DNA double strand breaks induced by TGFβ expressed in the tumor microenvironment.
An Akt3 Splice Variant Lacking the Serine 103 Complement Activation via a C3a Receptor

CD39 Expression Defines Cell Exhaustion in Tumor-Infiltrating CD8⁺ T Cells

A Subpopulation of Stromal Cells Controls Cancer Cell Homing to the Bone Marrow

Complement Activation via a C3a Receptor Pathway Alters CD4⁺ T Lymphocytes and Mediates Lung Cancer Progression

CCR5⁺ Myeloid-Derived Suppressor Cells Are Enriched and Activated in Melanoma Lesions

YAP1 and COX2 Coordinately Regulate Urothelial Cancer Stem-like Cells

Interleukin-27 Exerts Its Antitumor Effects by Promoting Differentiation of Hematopoietic Stem Cells to M1 Macrophages

Type 1 IFN Receptor Signaling Controls IL7-Dependent Accumulation and Activity of Protumoral IL17A-Producing γδT Cells in Breast Cancer
205  MUC1-C Induces PD-L1 and Immune Evasion in Triple-Negative Breast Cancer  
Takahiro Maeda, Masayuki Hiraki, Caining Jin, Hasan Rajabi, Ashuji Tagde, Maroof Alam,  
Audrey Bouillez, Xiufeng Hu, Yoao Suzuki, Masaaki Miyo, Tsuyoshi Hata, Kunihiro Hinozaka, and Donald Kufe  
Significance: These findings show how upregulation of the transmembrane mucin MUC1 contributes to  
immune escape in an aggressive form of breast cancer, with potential implications for a novel immunotherapeutic approach.
Results from the European Prospective Investigation into Cancer and Nutrition Link Vitamin B6 Catabolism and Lung Cancer Risk
Hui Zuo, Per M. Ueland, Øivind Midttun, Stein E. Vollset, Geethe S. Tell, Despoina Theoﬁlaktopoulou, Ruth C. Travis, Marie-Christine Boutton-Ruault, Agniesz Fournier, Gianluca Severi, Marina Kvaskoff, Heiner Boeing, Manuela M. Bergmann, Renée T. Fortner, Rudolf Kaaks, Antonia Trihopoulou, Anastasia Kotanidou, Pagona Lagiou, Domenico Palli, Sabina Sieri, Salvatore Panico, H. Bas Bueno-de-Mesquita, Petra H. Peeters, Kjell Granlivst, Mikael Johansson, Antonio Agudo, Jose Ramon Quiros Garcia, Nerea Larranaga, Maria-Jose Sanchez, Maria Dolores Chirlaque, Eva Andanzac, Shu-Chun Chuang, Valentina Gallo, Paul Brennan, Mattias Johansson, and Arve Ulvik

Significance: This large cohort study firmly establishes an association between an index of vitamin B6 levels with lung cancer risk.

Correction: Germline BAP1 Mutational Landscape of Asbestos-Exposed Malignant Mesothelioma Patients with Family History of Cancer

About the Cover
Kinases are master regulators of cell signaling networks that are frequently dysregulated in cancer, and members of the kinome family have been successfully targeted for therapeutic benefit. In this figure, the activity, cellular requirement, disease association, availability of protein structures and drugs, and research publications associated with each of the 535 members of the human protein kinome are displayed. It highlights how most research attention has been focused on relatively small subsets of the kinome. In the associated resource-based review, the authors discuss their current understanding of the human protein kinome, highlight emerging and overlooked areas, and describe key aspects of kinase signaling biology and some of the challenges associated with treating perturbed kinase networks in patients. For details, see article by Wilson and colleagues on page 15.